Coles Associates Ltd.

Architecture, Engineering, Planning,
Management Consulting

REPORT OF THE FEDERAL-PROVINCIAL STUDY OF APPRENTICESHIP IN NEW BRUNSWICK

"The findings of this study are the personal responsibility of the author and, as such, have not been endorsed in their entirety by the members of the Steering Committee"

Presented To:

Federal Provincial Working Group
on the Apprenticeship Study for
New Brunswick

Presented By:

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Coles Associates Ltd.

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CHAPTER 1
INTRODUCTION

Under Clause 19.4 of the 1986 Canada-New Brunswick Training Agreement, the two governments agreed to conduct a study on Apprenticeship Training to be completed during 1987-1988.

The need for such a study emerged during the development of the Canadian Jobs Strategy (CJS) in 1985, when Provincial governments became concerned about the extent of continued Federal support for Apprenticeship Training. The concern was occasioned by a CJS condition that every trainee must meet the eligibility criteria of some CJS program. At the time that CJS was implemented, agreement with the Provinces had been reached that present arrangements in support of Apprenticeship Training would remain unchanged for 1986/87 on the condition that the Provinces/Territories undertake a review of Apprenticeship Training with the Federal Government.

Similar studies are being conducted in each province or territory, except Quebec, following similar Terms of Reference, and with the same general guiding purposes. Briefly, these are:

1) to determine the effectiveness of apprenticeship training in meeting Federal and Provincial labour market objectives (including the employment equity objectives)
2) to identify an appropriate role for federal involvement in apprenticeship within CJS,
3) to identify an appropriate cost sharing formula, and
4) to identify and agree upon means for improving the effectiveness of apprenticeship training.

Subsequent to the submission of the report of the study from each jurisdiction, they are to be consolidated with a general direction for change identified at both the federal and provincial level. A federal position and new arrangements will then be set forth, negotiated and implemented.

In New Brunswick, a steering committee was established to manage a study conducted by consultants. The steering committee was co-chaired and included two Canada Employment and Immigration Commission (CEIC) staff members and two Department of Advanced Education and Training staff members. The study which was conducted between March and June of 1987 by Coles Associates Ltd. is reported in the following pages.

CHAPTER 2
STUDY METHODOLOGY

The apprenticeship method of training is ancient, revered, contemporary and contentious. It may be felt by a large number of workers to be their alma mater, for them, the basis of their lifestyle. For employers, it is the source of qualified and dependable workers, thus assuring them a good business footing. For people outside the system, it is too frequently seen as a mysterious web of rules and regulations, controlled by many agents, but which might lead to better employment opportunities for themselves or their constituencies.

It is also both seen and used as a means of controlling access to employment in the trades, as a way of getting cheap labour, and a means of controlling trade jurisdictions.

Because of this diversity of beliefs and purposes of apprenticeship, the steering committee and the consultants determined that a number of perspectives on the system was necessary to a proper examination. Four main sources or types of data were used.

First, Consultants examined earlier reports from other jurisdictions that provided background and commentary to gain an understanding of the nature of apprenticeship. These reports also provided insight into problems, strengths, and potential new directions for apprenticeship in New Brunswick. Consultants also examined descriptive and statistical documentation on the present New Brunswick system including designations, registrations, current status, financial and other resource inputs, rules, regulations and controls. In addition, enrollment and financial data were provided by the CEIC Regional Office. Data from these sources were organized for presentation in the following descriptive Chapters.

The consultants conducted three field surveys. The first was a personal open ended interview with 37 employers, officials, representatives of governments, voluntary agencies and interest groups. One interest group declined to participate on the grounds this would duplicate their input through another forum. Of the 37, 17 were employers (12 of those in the designated trades), twelve were public officials (Federal and Provincial) and eight were interest group representatives. These interviews took place throughout the Province, each lasting an hour or slightly more. The issues covered in the interviews roughly paralleled the Terms of Reference for the study, with points of emphasis being (1) opinions and measures of labour market, instructional and technological effectiveness, (2) opinions and proposals for target group participation, (3) sharing of benefits and distribution of costs, (4) proposals for improvement including all the above points, delivery, including consultation mechanisms, and means for a better alignment between Apprenticeship and the CJS. The study focusses on the relationship of apprenticeship training to federal CJS objectives, and does not represent a complete analysis of apprenticeship.

A. Apprentices and Journeymen Surveyed

In order to assess the results of the apprentices' and journeymen's training experience and their opinions on how it could be related to CJS, we conducted a telephone poll of 71 apprentices and 48 journeymen. Well over one-half of these had been apprenticed or a journeyman for one year, but this does not accurately reflect their experience since this does not differentiate their status. However, almost 90% had less than six years total experience. The longest was 15 years.

Thirty eight trades were represented in the sample, with construction electrician, industrial mechanic, carpenter, heavy equipment mechanic and motor vehicle mechanic (in that order) being most frequently represented, comprising 40% of the sample. Other relatively frequently represented trades were plumber, stationary engineer II, welder, motor vehicle mechanic (Truck and Transport), and cook. These represented another 18% of the group. Union and non-union representation was fairly even, at 52% and 47% respectively.

Although seasonal construction trades were fairly highly represented in the sample and the group appears relatively young, their employment status was relatively positive: over 75% were currently working at their trade and another 7.6% had worked at it within the last 1-3 months. Eleven of the remainder (about 10% of total) were currently working at some other occupation. In all then, 101 (85%) were working while another 10% had worked in the last three months.

B. Employers Surveyed

A survey similar in style and content, but oriented slightly more to an evaluative posture was conducted among 111 employers of apprentices. Due to the similarity of structure, we are able to analyze the two surveys jointly.

The most highly represented trades in this survey were cook, motor vehicle mechanic, electrical mechanic, plumber, carpenter and machinist, in that order. The specific question to determine the trade was "In what trade do you hire the most apprentices?" Clearly some employers would hire apprentices in several trades so this was a quick estimate on the respondent's part. Also, since this was a telephone survey conducted during business hours, we believe there is a bias in favor of indoor related shop occupations and away from small employers in construction trades. In any event, these respondents represent over 48% of the sample. Other relatively highly represented trades were industrial electrician, heavy equipment mechanic, sheet metal worker, welder, barber, and refrigeration and air conditioning mechanic, about another 18%.

Over 61% of the total had employed only one apprentice at a time, while the most any respondent had employed at one time was 15 (one respondent). The union vs. non-union split was 26% to 74%.

Samples of each questionnaire and the interview schedule are included in the appendices of this report.

These latter two surveys were set up, conducted and analyzed independently, but using similar means. Also, the information tapped by each was similar, coinciding roughly with that among officials. Thus, the information presented in this report includes the actual data together with a joint discussion based on the three surveys and supported by the background and opinion of the study's principle researcher.

Survey data was machine analyzed using the PC version of Statistical Package for the Social Sciences (SPSS-PC).

CHAPTER 3
OPERATING CHARACTERISTICS OF THE APPRENTICESHIP METHOD AND SYSTEM IN NEW BRUNSWICK

As we saw above, apprenticeship is the traditional method of training skilled workers, dating at least from the Middle Ages in Europe. Traditionally the method requires (1) an employer who agrees to hire and provide on-the-job training to (2) a young person who agrees to work for a term and learn the specified occupation under (3) an indenture agreement which governs the relationship between the two principles. The occupation itself is usually seen to include both manipulative and cognitive components, substantive enough that several years are required to become a fully accomplished practitioner. Upon being fully competent, completing the time, and passing an exam, the apprentice becomes a journeyman, who may strike out independently.

The system governing the method as it is implemented in New Brunswick today continues to include or reflect all of those elements: we start with a (usually) young person who must have or find a job with an employer who agrees to provide supervision for the worker's on-the-job training and release time for theoretical training in a classroom. The Program Coordination and Apprenticeship Branches register an indenture agreement between these two, establish and coordinate the training program, while the Industrial Training and Certification Board certifies the successful journeyman.

A. Historical Note

In Canada, following a difficult start, apprenticeship became established as a skill training program, with an important input to a smoothly functioning economy, only during World War II. New Brunswick passed its original Apprenticeship Act in 1944 and entered its Apprenticeship partnership with Canada in 1946 under the Federal Vocational Training Coordination Act of 1942. This cooperation has continued, most recently, under the National Training Act of 1982.

In 1946, the apprenticeship program included only construction trades. This had grown to 51 trades in many sectors by 1968 and stands at 68 apprenticeable or certifiable trades now. Apprentice enrollment has grown steadily through these years until quite recently, when a decline was noted: in 1959, for the first time, over 1000 apprentices were enrolled, over 2000 were enrolled in 1966, over 3000 in 1969, and over 4000 by the mid 1970's. Enrollment peaked at 4465 in 1977 and stood at 3355 at the end of 1986.

The growth is fairly easily accounted for by overall population size, increased economic activity, improvement of a new program et alia. The decline is less easy to assign, but it may result from competitive factors such as advancing technology, more educational options, change to a service economy and even competition from CJS. This variation may also result from the reduction in large scale construction projects, since a large number of apprentices are in the construction trades.

Interestingly, while grade level requirements have almost universally been less than Grade 12, in the peak year over 55% of apprentices had completed Grade 12. Also 50% were over 25 years of age in that year.

The Apprenticeship Program is supervised and advised by a lay Industrial Training and Certification Board, which replaced the initial Apprenticeship Board in 1969. The present Board has seven members representing management, labour and academia. The Program Director is an ex officio member and chief executive officer of the Board.

The program has undergone a number of changes through the years. The growth in the number of designated trades and extension beyond the construction industry is the foremost attestation of this. Another is the change to six-week block release from day and evening programs and the current change to a modular training format. Also, the focus within government has evolved to reflect the need for more educational input to training. Today, the program is part of the Department of Advanced Education and Training, while classroom theory training (Block Release) takes place in the Community College system.

B. Designated Trades

In New Brunswick there are 68 designated trades. Table 1 on the following page gives a complete list of these trade names. Column 1 of the Table shows the minimum number of years it takes to complete apprenticeship in that trade, which is from 2 to 5 years. An apprentice does not always complete the course in the designated time due to layoffs or for other reasons. However, many others complete more quickly.

Of the 63 active trades, there are 41 trades with conventional mode of education and 12 modular trades. For the other 10, the information was not available. For three of the trades, Construction Electrician, Marine Electrician and Industrial Electrician, the first three years are modular and the fourth one is conventional, during a transition period.

In all of the trades listed, once qualified, an apprentice receives a Provincial Certificate of Qualification. There are 23 trades in New Brunswick that are designated Interprovincial Trades, meaning this certificate is accepted across Canada.

Of the 68 trades, two (Construction Boilermaker and Sprinkler System Installer) take the in-school training out-of-the province, and three (Calker/Chipper (Marine), Burner (Marine) and Blaster) have no apprentices, only a certification program.

TABLE 1

Training Standards Framework: New Brunswick Active Designated Trades
(Based on Ellis Chart)

TRADE	TERM (YRS)	MIN. EDUC. LEVEL	BLOCK RELEASE TERM	CREDIT PRE-EMPLOYMENT (WKS)	NUMBER OF ACTIVE APPR. DEC. 86
Appliance Service	4	-	---	39	--
Barber	2.5	9	(T)*	39	82
Boilermaker	3	9	6 WKS T	--	24
Boilermaker Marine	4	8	4 WKS T	--	--
Bricklayer	3	8	6 WKS M**	39	51
Cabinet Maker	4	8	T	39	17
Carpenter	4	9	6 WKS M	39	415
Constr. Electrician	5	9	6 WKS M	39	439
Constr. Millwright	4	10	6 WKS T	39	20
Cook	3	9	6 WKS T	39	136
Dispatcher	3	12	---	--	--
Drafting (Arch.)	4	9	---	--	2
Draftsman	4	9	---	--	1
Elec. Motor Winder	4	12	---	--	9
Elec. Mech. (Util.)	4	12	25 (tot.) T	--	6
Eng. Assistant	3	12	6 WKS T	--	-
Firefighter	3	10	18 (tot.) T	--	85
H.D. Equipment Mech.	4	9	6 WKS T	--	135
Industrial Electrician	4	10	6 WKS M	39	79
Ind. Instrument Mech.	4	12	7 WKS T	--	32
Ind. Mech (Millwr.)	4	10	6 WKS T	39	201
Insulator (Heat & Frost)	4	9	6 WKS T	--	18
Joinery	4	9	T	--	--
Lineman	4	9	18 (tot.) T	--	16
Lineman (Const.)	3	8	13 (tot.) T	--	47
Machinist	4	9	4 WKS T	39	79
Marine Electrician	4	10	6 WKS M	--	16
Marine Engine Fitter	4	9	4 WKS T	--	--
Mot. Veh. Body Repair	4	9	6 WKS M	--	103
M.V. Body Repair (Metal)	2	9	6 WKS M	--	7
M.V. Body Repair (Paint)	2	9	6 WKS M	--	6
M.V. Fuel/Electronics	3	9	6 WKS T	--	+13
M.V Mechanic	4	10	6 WKS T	39	418
M.V. Mech. (Truck & Trans.)	4	9	6 WKS M	--	112
M.V. (Steer., Susp., Brakes	3	9	9 (tot.) T	--	25
M.V. Transmission	3	10	---	--	1
Oil Burner Mech.	4	8	6 WKS T	39	--
Painter & Decorator	3	8	7 WKS T	--	34
Plumber	4	9	6 WKS M	39	141
Power System Oper.	5	12	---	--	2
Prod. Equip. Mech.	4	12	UNDER DEVELOPEMENT		7
Radio & TV Mech.	4	-	---	39	--
Refrig. & Air Condit.	4	10	6 WKS T	39	44
Roofer	3	8	6 WKS T	--	10
Serv. Sta. Attend.	3	8	6 WKS T	--	--
Sheet Metal Worker	4	10	7 WKS T	39	38
Ships Plater	5	10	4 WKS T	--	20
Small Equip. Mech.	3	8	6 WKS T	--	16
Sprinkler Installer	4	8	5 WKS T	--	12
Staker - Detailer	2	9	4 WKS T	--	6
Stationary Eng. 2	4	-	6 WKS T	--	102
Stationary Eng. 3	2	-	6 WKS T	--	67
Stationary Eng. 4	1	-	5 WKS T	--	2
Steam/Pipe Fitter	4	8	6 WKS M	39	76
Steel Fabrication	4	10	6 WKS T	39	21
Survey Tech. (Cartog)	3	10	8 WKS T	--	--
Survey Tech. (Inst.)	3	10	8 WKS T	--	8
Survey Tech. (Photo)	3	10	8 WKS T	--	--
Survey Technologist	5	12	8 WKS T	--	--
Switchboard Operator	3	9	3 WKS T	--	2
Truck/Trailer Repair	4	9	---	--	--
Waterwell Driller	3	9	6 WKS T	--	15
Welder	3	8	6 WKS M	39	117

*T - Traditional Time Based
**M - Modular Competence Based

C. Purpose and Benefits of Apprenticeship

In its general statements the Department indicates the two fold purpose of the apprenticeship program. These are to provide members of the work force with opportunities for skill training in certain designated occupations to a defined standard, and to provide industry with a supply of trained and qualified trades persons. In the surveys conducted for this study, these two purposes were clearly understood by the respondents. Emphasis may vary between the two depending upon the perspective of the respondent. Among the 37 officials, over 30 appropriately enunciated one or other purpose.

In support of these purposes, the Department has certain powers assigned by the Industrial Training and Certification Act. The Board referred to earlier is established to issue Certificates of Qualification and diplomas of Apprenticeship to those who successfully complete an apprenticeship program or to cancel or suspend certificates if called for. Also, the Board is empowered to designate a trade as being appropriate for a program of apprenticeship training.

The Director of the program is empowered and required to register apprentices, fill all indenture agreements, provide and administer all exams, supervise all training, inspect training facilities, prescribe pre-apprentice courses and to enforce the Act and Regulations. The Director also may assign or re-assign an apprentice to an employer in order to assure that he is getting appropriate, complete exposure to all facets of a trade.

The Lieutenant-Governor in Council may make regulations prescribing the qualifications for apprenticeship and pre-apprenticeship and prescribing the terms and conditions under which Certificates of Qualification may be issued, reserved, replaced, suspended or cancelled.

Although the Board is delegated the power to designate trades, very little is said about the conditions and no process or criteria are set out by which to identify an appropriate trade, neither in the Act nor the regulations.

In our surveys, a number of questions were directed toward confirming the purpose and benefits of the apprenticeship system. First, respondents in each group were asked the direct question "What is the purpose?" (Table 2). Over 76% of employees stated it was the best or only way to learn a trade, while 6.7% saw its purpose as supplying the needs of industry. Employers generally concurred (73%) that its purpose was to teach a trade, but a larger proportion saw it as assisting industry, 18.9%. Among officials, 30 accurately identified one or other of those two purposes, with the preponderant opinion favoring the individual training aspects.

TABLE 2 The Purpose of the Apprenticeship Program

Employer's Opinion			
Employee's Opinion	BEST WAY TO LEARN	91	76.5
	SUPPLY TRADESMEN	8	6.7
	MOBILITY	4	3.4
	STANDARDS	6	5.0
	REGULATE SUPPLY	2	1.7
	UP TO DATE SKILLS	5	4.2
	OTHER	3	2.5
		119	100.0

In regard to actual personal benefits, the form of the question changed: Employer's were asked why they hired apprentices, while employees were asked why they became an apprentice. Table 3 shows the results of that. Employees responses remained consistent with the way in which they perceived the purpose of the system. Employers appeared divided between generous and commercial motives, but with a leaning toward the latter.

Table 3 Benefits Pursued by Apprentice System Participants

	Value Label	Frequency	Percent
Employees	WANTED LEARN TRADE	86	72.3
	LEARN ANY TRADE	9	7.6
	LEARN & EARN	3	2.5
	PEER PARENT PRESS	3	2.5
	RECD ADVICE	12	10.1
	OTHER	6	5.0
		119	100.0
Employers	[illegible]	[illegible]	[illegible]

Even the large number of "other" category answers among employers includes many that are more favorable toward the firm, including "was paid to train", "to meet company style of operation" (4 responses) and "to assure supply" (3 responses).

Each participant group was also asked to indicate the greatest benefit they or their firm actually received. We received a surprisingly long list of "other" responses, and as regarding employers opinions, even some negative ones.

Table 4 Indication of Greatest Personal or Firm Benefit.

	Value Label	Frequency	Percent
Employee (Personal)	STABLE JOB	37	31.1
	LEARNED TRADE	48	40.3
	EARNED & LEARNED	8	6.7
	OTHER	26	21.8
		119	100.0
Employers (Firm)	[illegible]	[illegible]	[illegible]
	[illegible]	[illegible]	[illegible]
	[illegible]	[illegible]	[illegible]
	[illegible]	[illegible]	[illegible]
	[illegible]	[illegible]	[illegible]

As with the earlier question, employees answered consistent with their observation of the program's purpose which was that they learned a trade (40%). On the other hand, employers perceived the learning of a trade as benefitting them more as a long term proposition, to meet their need for skilled labour. Among "other" responses of employers were eight indicating no benefit, or even a cost to the firms. One said he would not do it again. Some others stated that while the firm gained a bit the employee was the real gainer.

Most officials judged that the system was doing a good job in regard to achieving the purpose, or delivering on the benefits: Three said no while 10 gave mixed opinions.

Officials listed benefits that are consistent, but more wide ranging. They reported benefits related to a structured and standardized system, mutual confidence in the products which can even be extended to consumer confidence generally and general economic benefits such as productivity, mobility, security and improved lifestyle. These representatives were very much undecided concerning which party benefits most from apprenticeship: seven said the apprentice, eight said the employer, 14 were undecided or could not say, while one named consumers and one named the bureaucrats or "those in control".

To complete this listing of beneficiaries, employers and workers were asked to name who, other than their own group, benefitted most from the system. The results are shown in Table 5 below

Table 5 Identification of Other Beneficiaries

	Value Lab	Number	Percent
EMPLOYERS	THE APPRENTICE	101	91.0
	EMPLOYEES	1	.9
	THE PUBLIC	8	7.2
	OTHER	1	.9
		111	100.0
EMPLOYEES	NO RESPONSE	1	.8
	EMPLOYER	98	82.4
	GOVERNMENT	1	.8
	PUBLIC	19	16.0
		119	100.0

While there is some awareness that the consuming public might benefit, most respondents indicate their opposite labour market number benefits most.

D. Administration and Work Load

As we have noted, over 3,300 workers were apprenticed in New Brunswick in 1986. To assist the Director in his duties regarding this large number, there were 19 field officers. In addition to assisting the Director, these officers are required to make a periodic visit to apprentices and their employers on the job, discuss the training, the apprentice's progress and schedule a Block Release period.

In order to help develop and supervise the Block Release training content, a system of Trade Advisory Committees, made up of trade and industry representatives, advise on the current content of courses and examinations. A committee is established for each designated trade, or group of trades. Selected curriculum officers administer the committees.

Recently, the program has been transferred to the Department of Advanced Education and Training, the Department which supervises the Community College system. A group of curriculum officers in that department are carrying on the process of updating the curriculum for each trade, based on an occupational task analysis.

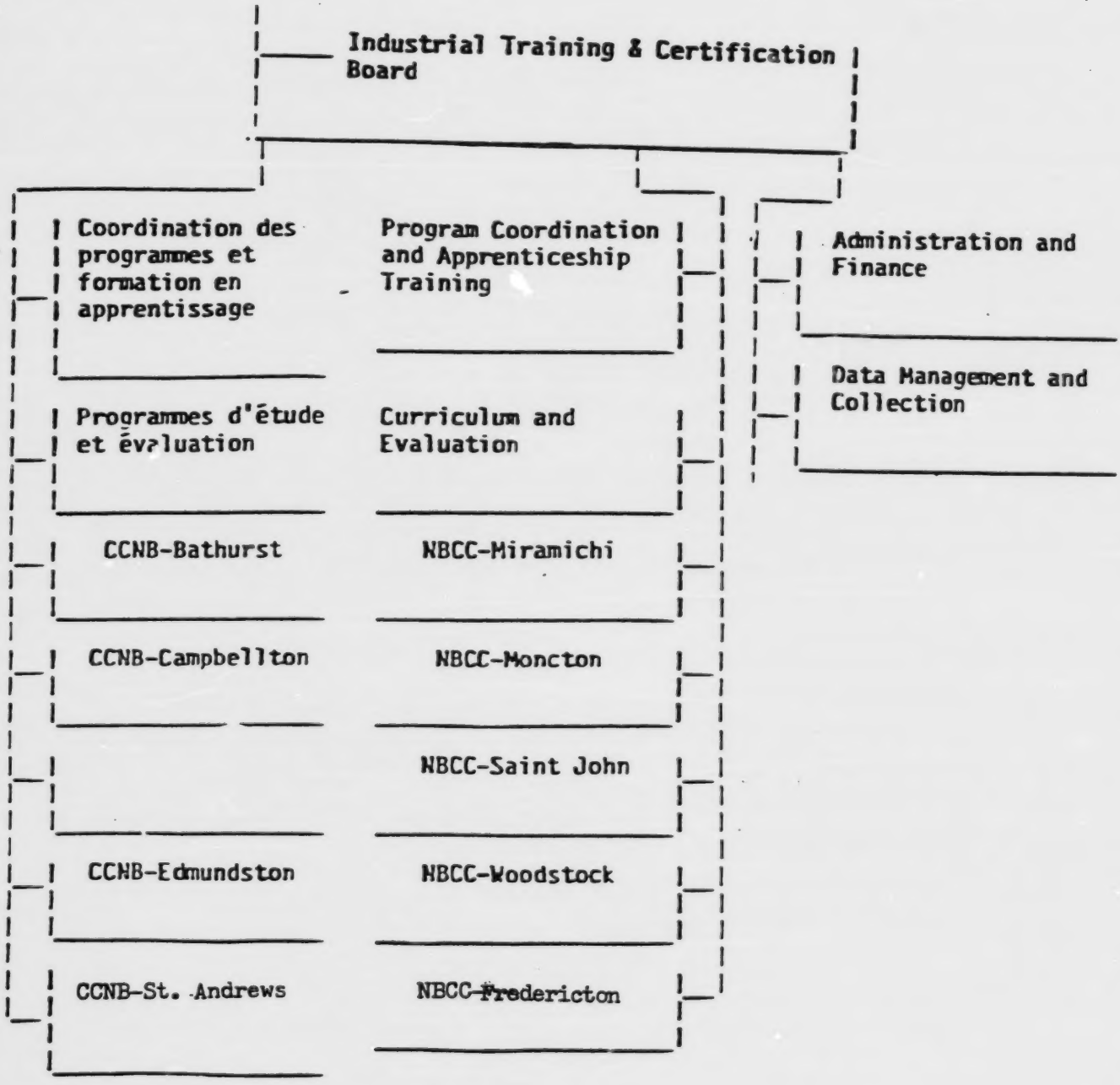
Each of the ten regional offices has one supervisor and a number of them have officers who are responsible to perform all the required monitoring of an apprentice's progress from registration through to graduation. Some of their duties are arranging for indenturing of apprentices, checking of the apprentice's on-the-job training, policing of apprenticeship, ensuring the in-school training is going well, trouble shooting, accepting applications for apprenticeship and certification of qualification and supervising examinations.

In our survey, most officials stated they were consulted about the Apprenticeship program and industry's needs for numbers and quality of journeymen. Still, there was an indication of concern that the Trade Advisory Committees did not meet often enough and did not deal in a specific enough fashion with the upgrading of trade content. Freeing these curriculum officers to devote time to the committee work may result in more up-to-date Block Release, pre-apprentice, and on-the-job training programs.

The organizational chart in Exhibit 1 shows those sections of the Department directly involved with Apprenticeship.

Exhibit 1 Organization of New Brunswick Apprenticeship System. Sections of The Department Directly Involved with Apprenticeship

(Source: Department of Advanced Education and Training Organization Chart)



E. The Apprenticeship Process

Entry to the apprenticeship system is relatively simple, though not necessarily easy. First, the candidate must be 16 years of age, then, depending upon the selected trade, must have a certain grade level or the equivalent, and finally, must become employed. It is the latter criterion which is most difficult, especially in slow economic times. For although some people claim it is an advantage to hire low wage level apprentices, there are still significant barriers. First, there may be an opening only for a skilled journeyman or an almost completed apprentice. There are also journeymen-to-apprentice ratios, to ensure that supervision and on-the-job training do occur, so if not enough journeymen are working, no apprentice can be hired. Finally, there are employers who do not want apprentices under any circumstances, claiming that the wage differential does not offset the expense of low productivity.

i. Selection and Entry

The selection and entry process is, of course, key to the participation of special groups, has a large bearing on the nature of training that can be offered and on the quality of the finished product. This process is now controlled by the employer, by unions, but is only influenced indirectly by the Community Colleges and the apprenticeship system.

Table 6 shows how employers report selecting their apprentices and how employees report being selected. A far greater proportion of workers' report getting a job by their own efforts than do employers by taking general applications. There is also a discrepancy between workers report of referral from instructors and the employers' report of taking such referrals (from the entire government system). Possibly, students are not aware when an instructor or other person makes such a referral. These reports only rarely relate to a C.E.I.C. referral.

TABLE 6 Reported Means of Entry to Apprenticeship

	Value Label	Frequency	Percent
Employers	GENERAL APPLICATIONS	44	39.6
	REF FROM FRIENDS	18	16.2
	REF FROM UNION	3	2.7
	REF FROM GOVT SYSTEM	42	37.8
	OTHER	4	3.6
		111	100.0
Employees	REFERRED BY INSTR	8	6.7
	REFERRED BY FRIEND	13	10.9
	REFERRED BY UNION	4	3.4
	JOB ON OWN	83	69.7
	OTHER	11	9.2
		119	100.0

Many employers reported that some prior experience was an important asset, and officials also suggested this would be a useful pre-requisite. One union representative stated it was now the policy of his association to favor candidates who had taken the pre-apprentice training. Employees were asked about their contact with the trade prior to indenturing. The results are shown in Table 7 below. These results at least bear out the incidence reported above of referrals by instructors. A surprisingly high proportion (23%) had no prior contact. It is an interesting issue whether these people and those who were already employed in the trade could be said to be by-passing the system, or "bucking the line".

TABLE 7 Employees Contact With Trade Prior to Indenturing.

Value Label	Frequency	Percent
PRE APPRENTICE	8	6.7
VOCATIONAL H S	12	10.1
EMPLOYED IN TRADE	39	32.8
FAMILY IN TRADE	19	16.0
NONE	27	22.7
OTHER	14	11.8
	119	100.0

Officials were asked to explain their understanding of this selection and entry process. Many find it a confusing and unclear process, but more than half did describe it completely. Six admitted they did not know and three said entry followed only a trial period. Both officials, and employers in the telephone survey were asked about the fairness of this process to target groups and its effectiveness in getting the best employees. Predictably, their responses diverged significantly.

Officials believe, 20 to 8, that the process is effective but far fewer deem it fair. Thirteen said it was, eight said it was not, and 13 did not give a clear answer. Among employers surveyed by telephone, as shown in Table 8, 86% thought the process effective, while 81% thought it fair.

TABLE 8 Employers Perceptions of Their Apprentice Selection Process

	Value Label	Frequency	Percent
IS IT EFFECTIVE	NO RESPONSE	1	.9
	YES	95	85.6
	NO	15	13.5
		111	100.0
IS IT FAIR	NO RESPONSE	6	5.4
	YES	90	81.1
	NO	15	13.5
		111	100.0

ii. Pre-employment Training

An apprentice gains entry through one of several entry points depending upon the trade and the industry. Many apprentices take the pre-apprentice program at the Community College which is one academic year of introduction to the trade. One year's credit is usually granted to beginning apprentices on their indenture term for this exposure when they are selected by an employer. Other apprentices are hired "off the

street" and after a short or long period may agree with the employer to become apprenticed and together register with the Branch. If the person is hired in heavy industry with an industrial union, a system of posting and bidding may come into play. In these cases, the production worker looks on apprenticeship as a first step in a promotional career ladder. Also, in some construction trades, entry may be controlled by the craft union which, even if a person could get a job, may refuse entry to the union rolls, and, therefore, deter gaining experience.

For those who gain entry, the first period is usually an on-the-job experience. (This explains the current growing propensity by many employers to look for quality referrals from the pre-apprentice program. This ensures the beginner has some understanding of how to behave on the job). At some point in this first employment year, the candidate is scheduled for his Block Release period (usually of about six weeks), to "pick up the theory". The sequence is then repeated until the final year of the indenture, when the apprentice, the employer, and the field officer agree the candidate is ready to write the exam for certification.

TABLE 9 Registered Apprentices with Pre-Employment Training
(Source: Department of Advanced Education and Training)

Apprentices	1985	1986	Currently
Total Registered	896	1,164	3,290
Registered with Pre-Employment	488	641	1,669
Percentage of Apprentices with Pre-Employment	55%	55%	51%

Over 50% of the Apprentices have had pre-employment training. When they had the training is not taken into account.

It is difficult to draw conclusions from the statistics provided to the Consultants as to how many trainees continue on into the apprenticeship program after successfully completing the pre-employment program. In order to find that out we would have had to compare each individual apprentice registering with pre-employment training against the pre-employment successful completions student list. We do know that not everyone completing the pre-employment program is going into the apprenticeship program. At the same time, there are trades in which the number of apprentices registering with pre-employment is higher than the number of pre-employment successful completions in that year, because these apprentices received their training in earlier years and are now coming back to the trade.

In the following table, we have more detailed information on some selected trades.

TABLE 10 Detailed Statistics on Selected Trades
(Source: Department of Advanced Education & Training)

	ACTIVE APPRENTICES			IN-SCHOOL TRAINING	CQ's ISSUED
TRADE	Jan.85	Jan.86	Jan. 87	1985-1986	TO DATE
Carpenter	401	398	415	183	2,456
Construction Elec.	366	297	439	404	3,025
Mot.Veh. Mechanic	401	415	418	324	3,820
Steam/Pipe Fitter	106	82	76	58	1,659
Industrial Elec.	85	72	79	40	726
Machinist	73	72	79	43	411
Operating Lineman	19	18	16	18	360
Oil Burner Mech. (Residential)	19	15	13	7	291
Sprinkler System Installer	24	17	12	11	39

Over the three years, the enrollment in the listed trades has not changed greatly. The number of Certificates of Qualification issued to date in these trades is proportionate to enrollment except for carpenters, where fewer people apparently complete the program.

The attendance at the in-school training seems to vary anywhere from 45% to 100%. These figures are difficult to compare since the school attendance is for the year 1985-1986 and the active apprentice list is as of January 1, 1986.

iii. Regional Distribution

Table 11 gives the distribution of apprentices by region in New Brunswick.

TABLE 11 Active Apprentices by Region as of April 23, 1987
(Source: Department of Advanced Education and Training)

REGION	NUMBER
Campbellton	213
Chatham	255
Woodstock	146
Bathurst	453
Edmundston	188
Fredericton	578
Moncton	680
Saint John	677
St. Andrews	87
	3,277

It is difficult to judge the boundaries of the surrounding area from which apprentices would be coming into one of the centers. Therefore, a population comparison could not be made. Estimating by the size of the center and its' relative industrialization level, the above distribution seems to be about proportionate.

iv. Language of Training

As 33% of the N.B. population is Francophone, this represents an additional dimension in providing training in the province. The Department of Advanced Education and Training has established parallel branches to serve both language groups.

The Province of New Brunswick is unique in Canada, in providing this parallel structure and this dual stream of service. Due to data limitations, we were not able to quantify the additional expense attributable both to administration and to training. We believe, however, that the training contribution is significant, in part because it sometimes results in smaller classes than would otherwise be the case. On a per apprentice basis, this tends to raise the cost, and may represent part of that cost shown in Chapter 7 as a Provincial contribution.

Finally, for information, Table 12, which is based on registration data, shows the distribution of English, French and Bilingual candidates, as indicated by preferred language of instruction.

TABLE 12 Distribution of English, French and Bilingual Apprentices by District (1987) Based on Preferred Language of Training (Source: Department of Advanced Education and Training)

DISTRICT	ENGLISH	FRENCH	BILINGUAL	TOTAL
Bathurst	261	183	12	456
Campbellton	143	66	4	213
Chatham	246	7	1	254
Edmundston	77	111	1	189
Fredericton	557	13	12	582
Moncton	636	40	5	681
St. John	670	9	0	679
Woodstock	145	0	0	145
St. Andrews	89	0	0	89
	2,824	429	35	3,288

v. Summary of Activity

The figures in Table 13 summarize the activity in the apprenticeship program.

TABLE 13 Summarized Statistics on Apprenticeship Activity in 1985 and 1986
(Source: Department of Advanced Education and Training)

	1985 Apprentices	%	1986 Apprentices	%
Active Apprentices	3,213	100	3,355	100
New Registered	1,930	29	1,046	31
Cancelled	512	16	495	15
Completed	480	15	395	12
In-School Training	2,087	65	2,100	63
Total CQ's issued	1,488		1,018	
Total IP's issued	474	100	386	100
Total IP's to Apprentices	297	63	242	63
Total IP's to Tradespeople	177	37	144	37

Approximately 30% of the apprentices are new apprentices each year, with about a 15% drop out rate. Approximately 12-15% of total active participants complete the program each year. About two-thirds of the apprentices attend the in-school training program in each year, possibly because almost 30% of apprentices are new entrants. According to the Branch, up to another 10% may have completed Block Release but are waiting to take the qualifying exam.

The table also shows total number of Red Seal certificates issued in that year. The Interprovincial certificates are divided among the apprentices and tradespeople by 63% to 37%.

Table 14 gives the passing rate for the exams. A pass rate of 41% for the exams does not seem high. This may indicate the high standards of the program, i.e. that not just anybody can get the certificate: one must be qualified. Alternatively, it may reflect poorly on the training program or a poor fit between the exams and trade contents.

TABLE 14 Percentage Passing Exams - 1986
(Source: Annual Report Department of Labour - 1985-1986)

TYPE OF EXAM	NUMBER OF CANDIDATES	% PASSED
CQ's	1,260	41
IP's - Apprentice	470	61
IP's - Tradespeople	747	23

Upon passing the final certification exam, an apprentice receives both a diploma of apprenticeship and a Certificate of Qualification in that trade. In Interprovincial trades, the apprentices receive an Interprovincial certification if their grade is 70% or above. As with apprentices, those tradespersons who attain 70% or above are awarded interprovincial status. Provincial status is granted to those persons gaining a grade of 65% to 69%. Therefore, there is actually an overlap in number of candidates for CQ's and IP's. An apprentice who is a candidate for IP is also a candidate for CQ at the same time.

Even a pass rate of 61% for the Interprovincial exam for apprentices does not seem high, but it is more than double the percentage (23%) for tradespeople. This might indicate that the apprentice acquired more relevant skills and knowledge from the in-school training program and supervised structured mode of on-the-job training than a tradesperson on a regular job. The training program is teaching apprentices skills that are difficult to pick up without formal in-school training.

F. Preparation for a Trade

Preparation for journeyman status may be in three parts: Pre-apprentice for which the candidate is credited in most programs, or high school, which may provide some credit; on-the-job training (OJT), which is the longest part, requires employment and provides hands-on practical experience; and some form of short term classroom study to get the theoretical content of the trade. This portion is usually conducted in six week periods of release from the job called Block Release. Its content should be oriented to explaining concepts - the why of a trade - and may require high level cognitive ability. In many trades, a modular or self paced instructional method is used; the same approach applies during OJT.

Most comments regarding these approaches were highly favorable regarding the Block Release, but less favorable to the modular system within it. For example, the modular method is open to the following abuses or misunderstandings.

1. The apprentice can pick the easy components, precluding gaining thorough contact and mastery.
2. Employers may check off tasks before they are encountered or before they are thoroughly mastered.
3. Instructors tend to direct a learner to the resources, rather than providing instruction, including tutorials. This is especially difficult to non-academically oriented students who may have an aversion to reading.

Employers and employees were both asked about changing the Block Release system. Table 15 shows that most employers want it left as is (66.7%) while a somewhat surprising 23% would increase its length, and 6% would reduce it. Employees, more specifically, answered they would not reduce the Block Release (80%), but 12.6% would.

Table 15 Participants Opinions Regarding Changing Block Release.

	Value Label	Frequency	Percent
Employers (Change B.R.)	NO RESPONSE	3	2.7
	REDUCE IT	7	6.3
	INCREASE IT	26	23.4
	LEAVE IT THE SAME	74	66.7
	OTHER	1	.9
		111	100.0
Employees (Reduce B.R.)	NO RESPONSE	8	6.7
	YES	15	12.6
	NO	95	79.8
		1	.8
		119	100.0

All respondents were asked whether they favored a system which emphasized competency based training and certification over a time based standard. Many officials indicated it was necessary to serve some definite amount of time if only in order to become acculturated. As Table 16 shows, workers favor the time based standard by 2 to 1 over even a combination, while employers are as strongly in favor (55%) of time, but also lean to a combined measure, 31.5%.

Table 16 Attitude Toward Time vs. Mastery Certification Standard.

	Employers		Employees	
Value Label	Frequency	Percent	Frequency	Percent
NO RESPONSE	1	.9		
TIME	61	55.0	65	54.6
MASTERY	14	12.6	23	19.3
COMBINATION	35	31.5	31	26.1
	111	100.0	119	100.0

Another criticism often levelled is that the term of indenture is too long, and that this is deterrent to entrance. Most officials did not agree with this statement: none put forth evidence that people were deterred by facing a 3, 4 or 5 year term. On the contrary, most indicated that apprenticeship was seen to be attractive, the training term was either an asset or at least necessary, and that in any case, the apprentice had a good income during the period. The telephone survey tried to determine what would be a reasonable term. Almost one-half of employees stated that four years were necessary to learn the trade, while employers generally concurred. We have not shown these results, since it may be that responses reflect what is required by regulation rather than by the conditions of training and employment.

G. Red Seal Program

As stated earlier, certain trades are designated as Interprovincial trades, meaning the certification program is standardized across Canada, and the Certificate is marked with a Red Seal.

Table 17 gives statistics on the number of apprentices and tradespeople who received a Red Seal in 1985 and 1986. The high number of workers receiving this certification indicates the importance of the program. It is not only important that one knows the trade, but also to have a certificate indicating that. Over one third of the people receiving the Red Seal each year are tradespeople already working in the trade for several years.

The Red Seal contributes to geographic mobility which is an important factor in measuring the effectiveness of apprenticeship as a labour market instrument. Considering the high degree of mobility popularly associated with young people and the trades, surprisingly few workers in our survey had ever worked with people trained elsewhere (27.7%). Only journeymen were asked if they had worked elsewhere, but again surprisingly, only two of 48 had done so. Employers indicated greater contact with migrants: 26.1% had hired tradespeople from outside New Brunswick.

The Red Seal is usually considered the document required by employers to determine that a job applicant is suitable. In this survey, 8% of employers require the Red Seal, while almost 70% ask for some other form of certificate. Too few journeymen had worked outside New Brunswick to get useful material on this issue from elsewhere.

Table 17 Red Seals Issued to Apprentices and Tradespeople In 1985, 1986 and To Date

(Source: Department of Advanced Education & Training)

	1985			1986			TO DATE		
	APP.	TRADES.	TOTAL	APP.	TRADES.	TOTAL	APP.	TRADES.	TOTAL
BOILERMAKER		13	13		1	1	27	41	68
BRICKLAYER	2		2	3		3	58	33	91
CARPENTER	29	9	38	26	17	43	921	271	1192
CONST. ELECTRICIAN	38	3	41	35	10	45	973	224	1197
COOK	34	21	55	22	8	30	153	111	264
HEAVY DUTY EQUIP. MECH.	29	13	42	11	11	22	371	87	458
INDUSTRIAL ELECTRICIAN	21	7	28	12	9	21	132	61	193
INDUS. INSTR. MECH.	6		6		3	3	108	47	155
INDUST. MECH.(MILLW.)	46	20	66	33	55	88	768	313	1081
LINEMAN				19		19	92		92
MACHINIST	5	3	8	6	3	9	129	33	162
M V BODY REPAIR	8	5	13	4	7	11	220	34	254
M V MECHANIC	29	29	58	23	9	32	1080	331	1411
OIL BURNER MECH.(RES.)	3	1	4	2	3	5	21	22	43
PAINTER & DECORATOR	1	1	2	4		4	21	10	31
PLUMBER	7	7	14	20	1	21	365	54	419
RADIO & TV SERVICE TECH									
REFRIG. & A. C. MECH.	1	1	2				47	13	60
SHEET METAL WORKER	3		3	8		8	73	8	81
SPRINKLER SYSTEM INSTAL.	6	1	7	1		1	13	12	25
STEAMFITTER-PIPEFITTER	14	11	25	7	2	9	293	563	856
WELDER	15	32	47	10	7	17	99	133	232
TOTAL	297	177	474	242	144	386	5,853	2,457	8,310

H. Employer Participation

We saw above that employers control the selection and entry point to the apprenticeship system. Employers also play an important role in the overall training of the apprentice. One of the requirements for a person to be an apprentice is to become indentured to an employer, a company or an organization authorized for that purpose in that trade under provincial legislation. The employer provides valuable on-the-job training under the supervision of an experienced tradesperson from whom the apprentice acquires the necessary knowledge and skills. The employer also gives the apprentice time off to attend the in-school training program each year for the term of the indenture (usually 3 to 4 years). Once certified, most apprentices stay on with the same employer.

The following table gives the total number of active employers by region in New Brunswick. Apart from these, there are three out-of- province employers. There is also another list of 145 inactive employers who have had apprentices but did not have any at the time of writing.

TABLE 8 Active Employers by Region in New Brunswick
(Source: Apprenticeship Section)

REGION	NUMBER
Bathurst	265
Campbellton	90
Chatham	163
Edmundston	160
Fredericton	362
Moncton	473
Saint John	328
Woodstock	127
St. Andrews	156
TOTAL	1,968

The significance of the employers participation is equally important in considering the quality of training in terms of its technological currency. For example, officials in our survey generally believe that the apprenticeship system is up-to-date (19 out of 30 respondents) but three of those indicated only the on-the-job portion was up-to-date.

Similarly, workers were asked whether their on-the-job training and Block Release training were up-to-date and then what effect that had on their employment experience. Table 19 shows their rating of the training, while the subsequent table displays their opinion regarding the training quality impact on employment.

Table 19 Technological Currency of OJT and Block Release Training.

	Value Label	Frequency	Percent
On-the-Job Training	YES	98	82.4
	NO	21	17.6
		119	100.0
Block Release Training	NO RESPONSE	10	8.4
	YES	79	66.4
	NO	30	25.2
		119	100.0

As the table shows, on-the-job training is seen to be up-to-date by more participants than is the Block Release classroom portion. This finding is consistent with the reports by both employers and officials. Still, it might be thought significant that so large proportions do not believe that either portion is up-to-date.

Table 20 Value of Up To Date Training in Getting and Holding a Job

	Getting A Job		Holding A Job	
Value Label	Frequency	Percent	Frequency	Percent
NO RESPONSE	1	.8	1	.8
YES	90	75.6	60	50.4
NO	20	16.8	49	41.2
DOES NOT APPLY	8	6.7	9	7.6
	119	100.0	119	100.0

Relatively few people reported that both Block Release and OJT were out of date (16). Of those, 10 said this did not hurt them in getting a job and 11 said it did not hurt in terms of keeping a job.

I. Summary and Conclusions

Apprenticeship was initiated in New Brunswick in 1946 with six construction trades, in order to assist workers to become accomplished in these trades and to provide thoroughly competent workers in whom employers could have confidence. The program grew to include over 4,000 workers by the mid 1970's, but has declined to just over 3,000 today in 68 trades.

A candidate may follow one of several paths to journeymen status, but it is essential in every case to have employment in which to acquire the hands-on experience. More and more frequently employers and unions are looking for beginning apprentices to have the pre-apprentice year training for which the system also provides credit toward the time requirement. The entire training sequence is managed by the Provincial government through the Department of Advanced Education and Training, its advisory boards and committees.

The New Brunswick Apprenticeship Section has 68 designated trades, of which 23 are Interprovincial trades, two have in-school training out of the province and three have no apprentices, only a certification program. For most trades, the enrollment, whether high, medium or low, usually does not change radically from year to year. There are a certain number of new registrations, dropouts and completions each year.

The apprenticeship training includes on-the-job training in which almost 2000 employers have participated. There is a good attendance in the in-school training program. Once an apprentice completes the training successfully he/she receives a certificate of qualification with or without the Red Seal depending on the trade and marks obtained. The percentage of apprentices passing these exams is 41%, which does not suggest a high passing rate. This could indicate that the standard of the program is maintained, or might be a reflection of poor fit between trade content and training content.

Apart from apprentices, a large number of tradespeople also write these exams and become certified. The percentage of tradespeople passing is much lower than the apprentices which may at least indicate that the apprentices are learning more through the structured on-the-job and in-school training program than the tradespeople on the job. Most survey respondents agreed that the on the job portion of the apprenticeship was more up-to-date than the school portions. Keeping programs up-to-date is a function of the advisory committee system referred to earlier. Officials indicated a need and desire for greater consultation through these committees.

Many informants complained that apprenticeship training was not up-to-date technologically. Some others cautioned that the schools could get too far in front of industry, but this was unlikely. The majority stated that the on-the-job training experience was more likely to be up-to-date.

Officials gave mixed reports about the extent to which they were or wished to be consulted about the program, but most did say it was important if the program was to be up-to-date.

Two methods are now used for consultation. Individual contacts, formal and informal between apprenticeship officers and employers, and Trade Advisory Committees which meet periodically. Unfortunately, the former do not appear to result in a systematized updating, and the latter have not met frequently enough recently to have the greatest effects. Even committee members in rapidly changing trades indicated they had not met to review content in significant periods of time. The Community Colleges have similar committees but this also does not appear to be systematic.

In addition to using such consultation for updating, many employers indicated it would be useful just to know what their apprentices did during Block Release. They would like to know what their apprentices are capable of.

Most respondents among employers and workers favor a time-based qualification. Even officials recognized that some minimum time must be required. In fact, the present system combines both methods, though devices are included to reduce the time served.

As a result, the issue is not the basis of competency so much as the procedures for controlling it. Employers, depending upon their economic circumstances or their relationship to the apprentice may be prone to certain abuses: they may give credit for tasks not even encountered, they may give higher marks than are earned, they may keep an apprentice in menial or repetitive work, they may refuse to give the final credit. Instructors may fail to teach, may use other than employment mastery standards, and so on. The trade books and charts may be entirely out of date or be irrelevant in part. These influences of quality should be kept current by trade content analysis, by an education process with employers and supervisors and by frequent consultation between educators, trade supervisors, and employer representatives.

In this respect, the recent move of the program to the Department of Advanced Education and Training appears to be a good move. It will ensure the curriculum planners and trade analyzers are in close contact, and it will free up more time of those field officers to consult with and educate employers.

Employer selection is most frequently put forward as an insurance that supply will equate with demand over the long term. However, officials, employers and employees in our surveys reported blatant examples of employers by-passing the system to indenture friends or hire cheap labour, only to treat them to layoff, thus putting back those who seek to enter through pre-apprentice training programs.

The argument is made that employers should be free to hire who they choose, and in most cases, this will be a good tradesperson. But in many cases, employers themselves admitted, what the administration know, that unqualified people do enter the programs and need extra effort to become upgraded.

Some employers and some unions indicated they are using the Community College system more extensively for employee referrals. If this system were extended so that all trades candidates were required to take a pre-apprentice program, employers would still have the freedom to hire who they want, but from a pool of qualified people. Such a system would also ensure that target group members are treated more equitably in gaining good employment, which is an issue we examine in a later chapter.

Participants and observers of the apprenticeship system are agreed that its contributions to a smoothly functioning economy are manifold and important. It produces good quality workers at a certain level in the labour force hierarchy characterized by a fairly equal measure of manipulative and cognitive skills. As a result of this, employers, government and consumers have a degree of confidence in their safety and in expenditures made for these types of work. Also, as a result, journeymen are able to be mobile, so that a person may keep earning and keep producing.

The apprenticeship system which supervises the implementation of the methodology in New Brunswick ensures that standards are established, that training sequences are followed and that other factors included in a legal agreement - the indenture - are enforced. Consequently, designated occupations are viewed as favored employment by many. They pay relatively high wages, achievement of the standard of completion is assured in a relatively short time and skills are transferrable.

J. Recommendations

1. The Department of Advanced Education and Training should announce a goal to establish an apprenticeship system which everyone involved in occupational training will participate in as their preferred mode.

2. To implement this, the Department should assume greater control over entry to training and the trades.
   a) A first step should be to initiate a process of extending the list of compulsory trades.

2. Con't

   b) Every candidate should take the pre-apprentice program in order to create a pool from which employers will draw.
   Those candidates who enter from an employment situation should be assigned to pre-apprentice training as soon as possible, including those from industrial union posting and bidding systems. For those who continue to violate these rules, degrees of sanction should be imposed including eventually refusal to indenture, examine or certify.

   c) The apprenticeship system should use this control together with improved planning to coordinate supply with demand. Associated increased educational efforts and entry procedures used by Community Colleges should ensure target group participation equity. (See Recommendation 7).

3. Every designated trade should have an advisory committee established for it. If there is now a committee, it should be activated. For those trade committees which are now active, early consideration should be given concerning their recommendations. In addition to content of the training programs and the exams, Trade Advisory Committees should be asked for advice concerning responses to supply and demand and measures for including target group candidates in their trade.

4. The Provincial Government should increase its support of apprenticeship by the following means:

   a) More field officers to reduce the officers to apprentice ratio to about 150:1.

   b) Provide for increased consultation with industry through the Trade Advisory Committees.

   c) Provide upgrading for instructors, field officers and journeymen who supervise apprentices.

CHAPTER 4
THE CANADIAN JOBS STRATEGY AND THE APPRENTICESHIP SYSTEM

For almost a half century, occupational training has been viewed and financed as a joint undertaking of the provincial and federal governments. In fact, the 1942 Vocational Training Coordination Act empowered the Minister of Labor to enter into agreements for such cooperative funding, wherein occupational training is controlled provincially, but funded from a number of sources.

The basis for provincial participation has remained relatively stable, though new methods have been introduced to the policy implementation framework. The conceptual basis for federal participation has remained, but emphasis has changed over time, sometimes significantly. The parameters of this field have been economic efficiency and equity of access with goals achieved by influence and by financial incentives.

The current federal approach to training is the Canadian Jobs Strategy, which emphasizes employment equity for certain groups and which combines real employment experience with directly related training in skills which are scarce but needed in the local economy. As a result, perhaps more than earlier, there may be points of incompatibility between the federal and provincial objectives for participation in Apprenticeship Training.

The Canada Employment and Immigration Commission has indicated that financial assistance may not be continued for a program that does not meet Canada's labour market objectives, and does not have plans for meeting certain target group participation goals.

A. The Canadian Jobs Strategy

The Canadian Jobs Strategy was announced by the then Employment and Immigration Minister in June 1985. It consists of six discrete programs designed to meet the challenges of changing technology and changing world markets. One of the six programs is aimed at community development or community adjustment. Another is aimed at making innovative changes to the strategy as it matures and at developing innovative labour market approaches. The other four programs are of more interest to us in this review, namely Skill Shortages, Skill Investment, Job Development and Job Entry (Re-entry).

Each of these programs contains measures to ensure the equitable representation of target groups such as women, natives, disabled and visible minorities. Each also features a means to "complement and support existing efforts by provinces, employers and workers". Local Advisory Councils for the strategy ensure that it evolves and responds to "emerging needs of specific regions". The objectives of these programs as supplied by C.E.I.C. - Fredericton Regional Office are included as Appendix VI. Below, we provide a descriptive summary of four programs.

i. Skill Shortages

The approach of this program is to provide assistance to employers to train workers in high demand occupations where it can also be shown that a skill shortage exists, and no other training program can be used.

Either current employees or qualified candidates referred by a Canada Employment counsellor may be trained. The training sequence may be on- or off-the-job, full or part-time, for up to three years. In this program, while a candidate may be referred, it is up to the employer to make the hiring decision. Also, the employer decides on the nature of the training program that will be offered.

ii. Skill Investment

This program is designed to help employed workers threatened with lay-off due to technological or market changes. Workers may be trained during full time leave from a job at two-thirds of regular pay; or may combine on- with off-the-job training at a different level of wage support, or under a tri-party trust fund approach.

This program is limited to employed persons and to skills in demand identified by a particular employer.

iii. Job Development

The third program focuses on individual needs for improved long-term employment prospects. Its goal is to create a skilled work force.

The program is targeted to people out of work for 24 out of the last 30 weeks. It will provide training and job experience in occupations which have been identified to have some skill requirements and which offer increasing employment potential over a medium term.

The program takes place in a project framework which includes on-the-job training and related classroom training. Projects may be proposed by business, communities, voluntary agencies, and municipalities.

iv. Job Entry (Re-Entry)

Two special groups are targeted in this program: Unemployed young people who are not well prepared for employment and women who are returning to the work force after an absence of at least three years. It is oriented to ease the transition from school or home into regular employment for both of these groups.

In this program, business, labour, individuals, community groups and the public sector can sponsor projects in which participants gain experience, get skill training, career counselling, and learn job search techniques. These elements provide the basis for a smooth transition into the labour market.

B. CJS - Apprenticeship Compatability

Apprenticeship and CJS are difficult to compare since the former is a more narrowly based program, while the latter is a strategy with many objectives.

The consultants were provided with the stated objectives of the CJS programs, but they did not match up well with the more generally stated purposes of apprenticeship. The two major purposes of apprenticeship do not address the same issues as CJS. The purpose of apprenticeship training as it is presently structured can not be considered to be achieving all current federal labour market objectives as represented in CJS focus on:

- youth entering the labour force
- women re-entering the labour force
- long-term chronic unemployed
- those workers threatened with technological or market change
- communities undergoing labour market change
- occupational skill shortages

We then turned to a comparison of operating features of CJS (contained in public information pamphlets describing the four CJS programs that seem pertinent to this study) and apprenticeship. (See Exhibit 2). This assessment shows that the apprentice system meets or responds directly to nine of those points, including the Local Area response alluded to on page 39.

- work experience/classroom combination
- supports existing training efforts
- supports expansion of the work/study theme
- full or part-time training leave
- training trust fund (used under collective agreement)
- subsidized training
- training up to three years
- improve individual potential

On three of the seven remaining points, the Federal Government could, and perhaps should, make efforts to ensure that those involved in apprenticeship get equitable treatment with CJS participants. For example:

- CJS employers can, under certain conditions receive assistance to cover off not only direct training costs, but lost productivity due to training.
- CJS employers may receive up to $10,000 under some programs to adjust the work place to accommodate disabled people.
- Project oriented JS programs might be used to help apprenticeship training.

This third feature allows a sponsor to set up or simulate actual work and training experiences that would not otherwise occur. The approach is not part of apprenticeship in New Brunswick, but if it were initiated, it would provide a device to ensure encountering those aspects of a trade that an apprentice otherwise would not, neither at work nor Block Release. Some emerging technology applications, for example, might only be encountered in a simulated experience. The project sponsor might be an employer, an industry group, or an agency of government.

On the remaining four points, which are discussed more extensively below, and in the following chapter, apprenticeship failed to match up as directly. These four points, which are fundamental priorities of the CJS, are:

- Target group participation
- Meeting skill shortages
- Emerging labour market needs
- Layoffs due to technological change.

Exhibit 2: Features of CJS Programs Skill Shortage, Skill Investment, Job Development and Job Entry (Re-Entry) to Which Apprenticeship Should Correspond.

- Intended to respond to emerging needs of specific regions (all programs).
- Supports existing training efforts (all programs)
- Supports implementation and expansion of work/study programs (Job Entry)
- Full- or part-time training leave (Skill Shortage, Skill Investment)
- Training Trust Funds (under Collective Agreement) (Skill Investment)
- Subsidized Training (Skill Shortages, Skill Investment)
- Long term training (up to three years) (Skill Investment, Skill Shortages, Job Development)
- Improve individual potential (all programs)
- Employers re-imbursed to adjust the work place for disabled workers (Skill Investment, Skill Shortages)
- Combination of wage subsidies and capital and training cost contributions (Skill Shortages, Job Development)
- Project orientation toward structured work experience and off the job training (Job Entry, Job Development)
- Target Group Equity Participation (all programs)
- Meeting skill shortages (Skill shortages, Skill Investment)
- Emerging labour market needs (Skill Shortages)
- Reduce layoffs due to technological change (Skill Investment)
- Combines work experience with classroom training (all programs)

C. Summary and Conclusion

Apprenticeship objectives cannot be assessed as achieving those CJS objectives related to people entering or re-entering the labour force, people experiencing labour market difficulties for whatever reason, including discrimination, nor to labour market functional objectives related to moderating supply and demand due to market, technological or geographical shifts. However, the CJS includes four programs which have features that are not incompatible with apprenticeship. There remain difficulties with administrative procedures, definitions and eligibility criteria, but there are also many similarities in terms of purposes and training approach.

D. Recommendations

5. The Canadian Jobs Strategy programs should be clearly oriented to supporting apprenticeships. For example, CJS, Job Development, Skill Shortage and Entry programs should be used as controlled entry points and introductions to apprenticeship; Job Development should be used to develop simulation experiences in situations where complete exposure is difficult to arrange due to the structure of the economy of New Brunswick; Skill Investment should be directed to the upgrading of journeymen, especially those charged to supervise apprentices.

6. Industrial training officers should be assigned to provide field support for an on-the-job training component of newly designated occupations, in conjunction with community colleges. Clear criteria and processes for designating new occupations should be established, including some outreach projects initially.

   Consideration should be given to establishing cooperative situations among the Apprenticeship System, CJS, Community Colleges and employers under the Job Entry Cooperative Education option.

CHAPTER 5
SPECIAL TARGET GROUP
PARTICIPATION AND APPRENTICESHIP

A. Extent of Special Target Groups Participation in Apprenticeship

The special target groups referred to are Natives, disabled, visible minorities and women. Since no data is kept on enrollment of people from any of these target groups except women, the numbers presented below in Table 21 for Natives, disabled and visible minorities are from observation, not from documentation. Department personnel observe that the numbers are most probably higher. If the person does not stand out in other respects, e.g. he or she is performing the job well or does not require any special assistance, it could go unnoticed that the person belonged to one of those groups.

TABLE 21 Target Group Representation in the N.B. Apprenticeship Program
(Source: Department of Advanced Education and Training)

TRADE	NATIVES	DISABLED	VISIBLE MINORITIES
Carpentry	24		
Motor Vehicle Mech.	1	2	
Electrician	1	1	
Plumber	1		
Oil Burner	1		
Lineman		1	
Cook			2
M.V.M. (Truck and Transport)			1
Machinist			1
Heavy Equip Repair			1
TOTAL	28	4	5

From such informal observations we note twenty-eight Natives, four disabled people and five people from visible minorities groups as apprentices in the various trades.

i. Women

In all, 124 women are in the apprenticeship system in various trades. Of these, 85% are in the Cooking or Barber trades. The table indicates that very few women are joining the non-traditional or male oriented trades.

TABLE 22 Women in the New Brunswick Apprenticeship System (1987)
(Source: Department of Advanced Education and Training)

TRADE	TOTAL	FEMALE
Cabinet Maker	22	3
Carpenter	392	1
Industrial Elect.	65	1
Heavy Equipment Mech.	134	2
M.V.B. (Repair & Painter)	85	1
M.V. Mechanic	401	2
Steamfitter-Pipefitter	72	1
Plumber	149	2
Barber	82	62
M.V.M. (Truck & Transport)	107	1
Construction Lineman	56	2
Ships Plater	20	1
Cook	137	49
Water Well Driller	5	1
Total for all trades:	3,289	129 = 3.8%

ii. Youth

Another population group which experiences special difficulties in gaining access to employment is young people. Although youth are not listed among the special target groups of CJS, in fact an entire program is devoted to helping them enter the labour market successfully. (Job Entry).

The apprenticeship system in Canada has sometimes been accused of not being youth oriented, that by the time a person becomes apprenticed he or she is too old to conveniently fit into the learning situation, and this leads to difficulties. In the peak year for numbers of apprentices in New Brunswick, 50% were over 25 years of age. A number of reasons may explain that, including the high level of major construction projects during that period which would attract many people into those trades, from other employment situations. Another factor, which is always present is the bidding system in industrial union situations, in which an apprentice enters from an employment rather than a school situation. Finally, in North America, unlike Europe, the educational norm is to complete high school and then indenture. In the same year noted above for age distribution, over 55% of apprentices had completed Grade 12.

Because this group was not highlighted, we did not attempt to acquire statistical nor self report data on this factor. However, in a similar survey done in Prince Edward Island, most of the apprentices were under age 25. Also, in the decade since the peak year, there has occurred almost a revolution in education in New Brunswick. The rate of high school completion is even higher, the availability of the pre-employment year and employers use of this source, and of increased trade exposure in high school all push toward helping young people move immediately into apprenticeship.

Actually, this latter point may be more important than the average age of apprentices. That is, the system is perhaps uniquely capable of addressing the issue of ensuring a smooth transition from school to work:

1. There is a familiarization term of one year which is unsalaried and entirely sheltered.

2. The early employment years are at reduced wages, so that learning, non-production time and mistakes are allowed for.

3. A structured sequence, guided by a journeyman and supervised by an official is established.

4. For part of these early years, the youth returns to school.

As the consultants were told on one occasion, "It is a best kept secret that apprenticeship is oriented toward helping young people make the transition from school to work."

B. Discussion Concerning Target Group Participation Issues

Clearly, the apprenticeship program generally has very low participation rates among minorities and designated target groups. The reasons for this are many and vary from occupation to occupation. There are some legitimate situations having to do with the nature of the work activities and conditions which may deter physically disabled people and some women. There are traditional reasons related to language of the trades and the system, as well as habits and beliefs on both sides. The evidence from this study does not support any charge of organized bias, or deliberate exclusionary practices. The issue is affected by employers concerns for productivity, placement vs. free market activity, and degrees of interventionism. Most participants in the program feel it is freely available to everyone and are prone to compare it with CJS, which is seen to be unduly restrictive as to eligibility. Non-participants see it differently.

In our surveys, we attempted to get at this issue through a number of direct questions. The major focus of this line of questioning was upon employers and among officials, since this, the hiring decision, is the point of control and the decision for provision of training may be a deciding factor in any move toward change.

First, employers were asked if they hired members of these special target groups. Sixty two percent admitted they did not. In response to the follow-up: Why not? , 60% provided an answer: thirty said there had never been an opportunity or a request, demand or application from such people. Eight others indicated that women and disabled people could not do this work. Five stated they hired strictly on the basis of ability, while one person said it would cost too much to change the job site to accommodate special groups.

In their discussions, officials were not good at identifying obstacles or deterrents to target group members. Most (25) do not believe that the time requirements to become a journeyman or the time in Block Release Training act in this way. The most commonly mentioned obstacle was the need to get a job, but this was almost always placed in the current economic context, which is an obstacle to everyone. Others mentioned the complexity of the trades and the high standards of both entrance and completion, implying that some target group members may not want this challenge. Other factors were the nature of the work (outside, heavy, dirty, dangerous) and the traditions of language and culture involved.

Officials listed a number of entrance pre-requisites which they could accept. These varied considerably, with most thoughtful responses being an attempt to relate pre-requisites to the performance requirements of the job. Perhaps the best summary statement was that "pre-requisites should match the bona fide specific, occupational requirements". Obviously this requires extensive study and planning.

Employers were next asked whether apprenticeship should try to help target groups gain access, and whether this would affect the quality of tradespeople. Most employers (68%) said help should be given through apprenticeship and that, emphatically, this need not adversely affect quality (84%). Of those who felt there would be an effect (17) about one-third were concerned with lowering standards, about one-quarter were concerned with some form of reverse unfairness, one was concerned with cost, and the remainder expressed some form of bias.

Employers and employees were asked the direct question <u>how</u> to increase access for these target groups. The combined table below shows the range of suggested means.

TABLE 23 Proposed Apprenticeship Revisions to Include Special Target Groups.

	PROPONENTS	
Suggested Method	Number of Employees	Number of Employers
Open Now if Ability Present	25	
Increase Own Initiative	8	28
Raise Awareness	4	3
Increase Opportunities (Training and Jobs)	5	5
Compensatory Programs		14
Government Subsidize		5

Respondents among officials reflected these divisions. Seventeen respondents gave an unqualified <u>yes</u> when asked if the apprenticeship system should help ensure improved access for the target groups. Six others said <u>yes</u>, but employers must receive help from somewhere to modify the workplace or special compensatory efforts must first be provided to candidates to help them reach entrance standards. Several others stated that some other body should look out for this issue, indicating that such practice would serve only to distract apprenticeship from what they characterize as its main job of producing top quality workers in skilled occupations.

The opponents of change say: this is defeating the purpose of apprenticeship which should be oriented to producing the best qualified worker. It should, therefore, be someone else's responsibility to remove obstacles. For minorities, entrance is fair anyway if they can meet necessary standards, for women it is fair, but perhaps not attractive, and for disabled many skilled trades are too heavy, too dangerous or too diverse to easily accommodate their disability.

Those favoring change say: nevertheless, it is everyone's duty to provide fair access and a) Canada is overlooking at least 50% of its potential pool of skills and b) New Brunswick must include these people in order to access lucrative national contracts. The apprenticeship system, as a key player and the major gatekeeper, has an obligation to implement means to get these target groups involved.

A frequently proposed solution to this problem, especially among some officials is simply to extend the range of trades into fields that women, disabled or others will find more attractive or easier to enter for other reasons. Both employers and employees were asked about this option, i.e. whether to do it and to what trades. Table 24 shows their opinions regarding whether such extensions would be useful. The majority of these respondents do not think it would serve to assist the entry of these target groups.

TABLE 24 Would extending the System Help Increase Target Group Access

	Employees		Employers	
Value Label	Frequency	Percent	Frequency	Percent
NO RESPONSE	24	20.2	3	4.
YES	19	16.0	20	18.
NO	76	63.9	61	55.
	119	100.0	11.	100.

Those who said it would be useful were asked to suggest a suitable extension. We received 19 suggestions from workers and an equal number from employers. Responses could be roughly sorted into three categories:

1. Special areas, splinters, or new trades which might be suited to special needs:
   8 Employers
   5 workers

2. Hi-tech or other emerging occupations:
   9 Employers
   5 workers

3. Some perceived skill shortage area:
   2 Employers
   7 Workers

However, the Ellis Chart lists over 160 apprenticeable occupations, many of them suited to attracting women, disabled people, or other target groups. The apprenticeship program need not extend itself into emerging or exotic fields; the ground is already broken in bookbinder, dispatcher, drafting, landscaping, office machine mechanic, sign painter, et alia. Here and in other provinces, apprenticeship could be extended to those occupations and greater efforts to place apprentices and supervise them could be made.

On balance, it appears there would be little resistance to such a move, if standards were maintained, if others were not unfairly displaced, if employers did not have to bear added cost, and if proper means or agency can be identified.

C. Summary and Conclusion

There is a tendency among some observers, possibly because of their administrative frameworks, to conclude that CJS and Apprenticeship are not and cannot be compatible. We are more sanguine, starting from the fundamental observation that both programs use the method of combining varying degrees of on-the-job training and classroom training to acquire an occupational skill.

It appears on examination of their goals that the apprenticeship method, as practised in New Brunswick, and the Canadian Jobs Strategy are alike in several other fundamental ways. A number of respondents among officials noted that they had even found means of combining the approaches in projects, though serious definitional and administrative issues needed to be overcome.

Women, Natives, disabled people and visible minorities are under-represented in the apprenticeship system and in each designated trade except for women in cooking and barbering.

Therefore, while employers now express reasons that the system does not achieve ratio goals which they believe are valid, certain changes can be implemented to overcome even those reasons.

However, the question still arises whether access to the present designated trades is appropriate or whether access to the benefits of the apprenticeship system does not more accurately describe the goal.

Apprenticeship ensures a structured, legally protected, paid learning relationship leading to remunerative, usually respected and stable employment. If the same attributes and benefits could be applied and benefits gained through association with other occupations, those target groups and other people would be the beneficiaries and it could serve to take the pressure off some oversubscribed designated trades.

Consequently, we can see that many of these issues are intertwined, subject to improvement through one or two fundamental efforts, associated with more extensive trade by trade analysis and planning, plus the identification of other occupations which might benefit from an apprenticeship designation and establishing criteria for such designation. Therefore, assistance could be provided from exterior sources for employers to adjust the work place to accommodate the disabled. Simultaneously, a detailed task analysis might show how a trade could be modified to accommodate specific groups or individuals, while maintaining performance standards, and ensuring the quality of the employment.

However, probably no method will serve to "crack the system" for other individuals than to assist them to meet the grade level, language, and subject matter entrance standards by preparatory programs. Furthermore, those standards should not be met by social promotions in the school system, nor by any set time served in remedial instruction, but by stronger efforts, probably by the provincial government, to help those individuals achieve those pre-requisites. Whatever standards are adopted, it is important that they be tested standards, designed to be pertinent to the trade. Equally important is that they be subject to review, and to appeal.

Finally, the apprenticeship system can do some things to provide service to these target groups. Many target group representatives have a very low awareness of apprenticeship. Their interest is further reduced by the words used (trade, indenture, journeyman) as well as by the nature of the designated trades. In short, the terminology and culture of the system may actually work to make it exclusive, though not by design.

The measures to address this shortcoming are within the bounds of the apprenticeship system. For example, in designated trades,

1) other terminology may be developed
2) equity goals may be established
3) pools of qualified special group members may be developed
4) stronger public information programs can be launched, and
5) more occupations can be designated to enable wider access to the benefits of the system.

D. Recommendations

The apprenticeship system can be broadly or narrowly conceived. If we consider it as broadly as all the areas under the control of the Lieutenant-Governor in Council which have an immediate bearing on occupational training, it becomes clear that the system has a large share of responsibility and significant leverage for getting greater target group representation in the program.

7. Each trade should be subjected to analysis, similar to that for training content, to see what accommodations re necessary or could be made to include disabled people and women. Apprenticeship should be combined, in tandem, with other programs, including CJS, in order to complement the system for target groups. So long as the efforts do not affect productivity, avoid exclusion of any qualified individual or group, and do not require large cash payouts by employers, they will be readily accepted by participants. Therefore:
   a) For disabled people, employers should be encouraged to access CJS for funds to revise the job site or shop to suit individual needs. These program funds could also be used to provide necessary personal services to get a person into training and to assist subsequently on the job.

7. Con't

b) To attract women, efforts should be made to de-sex the specialized language of the system, more social support systems (e.g. child care) should be put in place, the workplace should be made more accommodative (e.g. separate comfort facilities), and training in specific fields to meet entrance requirements.

c) For Natives and visible minorities, an improved and expanded program of compensatory education to bring them up to tested Grade level standards in Language, Math and special skills should be implemented.

d) A public relations program including a general consciousness raising campaign, a hard sell targetted campaign, and responsive follow up counselling should be set up to attract and assist these groups.

e) The range of designated trades should be expanded to enable a wider access by target groups (and others) to the benefits of the apprenticeship system, thereby assisting both the individual and the needs of the labour market for adequately trained workers.

CHAPTER 6
APPRENTICESHIP AS A LABOUR MARKET INSTRUMENT

The titles of some CJS programs clearly express their orientation to solving labour market problems. Skill Shortages provides training in areas of designated occupational skill shortages, while Skill Investment assists workers to obtain new skills in response to changing technology and markets. While the others are not as specifically targeted all are oriented to skill requirements, mobility, threatened layoffs due to technological change and coordinating supply and demand.

A. Response to Changing Technology

A measure of the effectiveness of apprenticeship on this issue is whether apprenticeship itself is up-to-date technologically, whether it helps an apprentice keep up-to-date with new things in the trade, and whether it helps journeymen in a similar way.

Employers were asked, in companion questions, whether the program operated so as to keep apprentices and journeymen up-to-date technologically. Employees were asked a similar question. The following two tables display the responses. Again, among employers the program gets generally positive ratings, 80% Good to Very Good, while 16% rate it less than Good. As to journeymen, employers somewhat incorrectly indicate that it does a good job, since, strictly speaking, apprenticeship ends when a person becomes a journeyman. Nevertheless, the basis and the continuing contact may serve this purpose.

Apprentices were asked to compare their training with that of their predecessors and whether their training provided that basis for continued learning we spoke of just above. As Table 25a shows, apprentices are aware their training is more advanced (52%), but a majority do not believe this provides a continuous learning base. This may well be an accurate perception, given the pace of change in most trades today.

Table 25 Perceptions of the Program' Contribution to the Technological Currency of Training and Trade Practice

Table 25a Apprentices Perceptions Regarding the Technological Currency of Training, and Its Value as a Learning Base.

	Value Label	Frequency	Percent
Compare Current Technological Content	NO RESPONSE	4	3.4
	MORE ABOUT	62	52.1
	THE SAME AS	40	33.6
	NOT AS MUCH ABOUT	13	10.9
		119	100.0
Apprentice Training as a Basis for Later Updating	YES	45	37.8
	NO	3	2.5
	PART	1	.8
	DOES NOT APPLY	70	58.8
		119	100.0

Table 25b Does the Program Keep Workers Up To Date Technologically.

	Value Label	Frequency	Percent
Apprentices	NO RESPONSE	3	2.7
	VERY GOOD	29	26.1
	GOOD	60	54.1
	NOT TOO GOOD	18	16.2
	DOES NOT APPLY	1	.9
		111	100.0
Journeymen	NO RESPONSE	3	2.7
	YES	88	79.3
	NO	18	16.2
	DOES NOT APPLY	2	1.8
		111	100.0

In response to this same question, employers gave similar, though not as strongly directional answers. Just under one-half (48.6%) said apprentices learn more about modern technology, while about one-third said it was the same journeymen know. (Table 26).

Table 26 Employers Perception of Technological Currency of Recent Training

Value Label	Frequency	Percent
NO RESPONSE	3	2.7
MORE	54	48.6
SAME AS	38	34.2
NOT AS MUCH	16	14.4
	111	100.0

Many officials believe that apprenticeship should, can, and even does respond to emerging occupations and emerging skills as part of established occupations. In many cases, examples were given. Seven officials denied this can or does take place, while seven others did not give an answer. The comments reflect this diversity of opinion: three people said this was a function of good labour market planning and one said apprenticeship could not respond if change was very rapid. One other said this should apply only to re-training situations and another agreed, indicating it should be a function of the Community Colleges, not of the apprenticeship system.

The same respondents indicated that apprenticeship does not apply to the technological updating of journeymen, but many subsequently noted that it would be a good thing if some way could be found to utilize the Block Release system and facilities for this function. Some more knowledgeable respondents indicated that this was taking place, though it is, by definition, outside the apprenticeship system.

In addition to the assessments of technological currency discussed above, both employers and workers were asked to give an opinion on the quality of training by relating it to earlier times and to the products of other jurisdictions. Table 27 shows that just over one-third of employers think current training is better than earlier, while workers are more critical: 50% rate the current training equal while 10% say it is not as good. This may be understandable, since they are experiencing the anxiety of demonstrating their competence and because they are taking training during a transition to a new system.

Table 27 Quality Comparison of Recent vs. Earlier Training

	Value Label	Frequency	Percent
Employers	NO RESPONSE	11	9.9
	BETTER THAN	42	37.8
	SAME AS	33	29.7
	NOT AS GOOD	24	21.6
		1	.9
		111	100.0
Employees	NO RESPONSE	6	5.0
	BETTER THAN	41	34.5
	THE SAME AS	60	50.4
	NOT AS GOOD AS	12	10.1
		119	100.0

Telephone survey respondents were also asked, if possible, to compare the quality of workers trained outside of New Brunswick with those trained here. Of the 31 employers who made the comparison, 22 rated both groups equally, and split about equally between better and not as good. Among workers, 23 of 33 respondents rated them equally, with a slightly larger group claiming New Brunswick workers are superior rather than inferior.

A large number of informants among officials volunteered comments and suggestions concerning training quality improvements. Critical comments were directed at the modular approach.

This issue of responding to changing technology is sometimes seen in the context of "emerging occupations". Few of the officials survey respondents raised the issue in this form but many of those who did expressed doubt that apprenticeship was an appropriate method for training in emerging occupations. To be fair, others stated that apprenticeship was already responding to this need. It appears that this may depend on the definition used, whether an occupation is emerging due to technological change or due to market conditions. For example, the occupation used as an example in a CJS brochure is forest workers, for which the apprenticeship system could readily respond to emerging training needs. Computer applications in a manufacturing industry presents a different picture, wherein the apprenticeship method of broadly based, thorough training as a way to produce a competent, flexible, independent worker, is probably inappropriate. Such a worker may not be needed in that context, nor is a long-term theoretically based training course needed.

There have been no new trade designations in New Brunswick in the past two years. What recent designations there have been appear to have been market driven, rather than technology driven, e.g. Staker-Detailer, Production Equipment Mechanic.

In the minds of industry, employer and interest group representatives, the question of training quality, technological updating, emerging technological occupations, et alia are so inter-related, as to be synonymous. They believe they should be dealt with by more consultation among field officers, curriculum specialists, and industry. We examined this consultation matter in some detail in the first section of this report.

B. Layoffs due to
Technological Change

We also attempted to determine if apprenticeship can or should assist workers who are threatened by lay-off due to technological change. Employees were not asked a question in this field. Twenty four percent of employers agreed that apprenticeship should function in this way and officials, though more mixed in their opinions, appeared to agree. Twelve said this just did not apply to the apprenticeship method. If there was a consensus on this matter, it was that the purpose of apprenticeship is to train entrants to the trades, and that training to avoid layoffs due to technological change should be the responsibility of the industry, perhaps with government assistance.

The layoff of journeymen due to technological change is similar. The apprenticeship system must establish its limits at some point and perhaps this is an appropriate boundary. Since it does not work to upgrade and update journeymen now, it has neither experience nor mandate to enter the field. It seems more appropriate to have individuals, unions or employer groups, together with another government agency deal with this problem as the Community College System is starting to do. Of course, the apprenticeship system could be assigned this task if no other agency came forward, but it is functionally different and it would need appropriate additional support.

C. Mobility

Geographic mobility is an important factor in measuring the effectiveness of apprenticeship as a labour market instrument. As we noted earlier, surprisingly few workers had ever worked with people trained elsewhere (27.7%); only two journeymen had actually worked elsewhere, while of employers, 26.1% had hired tradespeople from outside New Brunswick.

The Red Seal is useful for journeymen but less so for apprentices, since the training sequence has not been standardized among provinces: only the finished product of the system is certified. The Maritime provinces attempted some years ago to standardize the training components for some trades, but the attempt foundered

As it stands now, people are not particularly mobile during their apprentice years.

D. Coordinating

Supply and Demand

In Chapter 3 of this paper, the opinions of various respondents regarding benefits was discussed. We saw that employers and official spokespersons believe that apprenticeship does supply their need for skilled labour. This does not, however, provide a measure of the actual match-up between the two sides of the labour market equation.

In fact, about one-third of workers believe that supplying skilled labour is the greatest benefit that employers receive from apprenticeship. Similarly, employers express their belief (80% yes) that the apprenticeship system helps supply labour in high demand-short supply occupations. However, when asked about the supply of journeymen and apprentices in the principle trade they hire for, responses were more mixed. Table 28 shows that 36% of employers thought there were enough journeymen and enough apprentices. Fairly equal proportions believe there are too many of both levels of qualification, while the proportions who say there are too few are more divergent (45% too few journeymen, 35% too few apprentices).

Table 28 Employers Opinions Regarding the Supply of Journeymen and Apprentices

	JOURNEYMEN		APPRENTICES	
Value Label	Frequency	Percent	Frequency	Percent
1 RESPONSE	2	1.8	10	9.0
2 MANY	19	17.1	22	19.8
3 ENOUGH	40	36.0	40	36.0
4 FEW	50	45.0	39	35.1
	111	100.0	111	100.0

Officials are more divided on the issue. Fourteen say the system does make a good match of supply and demand, while 11 believe it does not. Four employers in this survey responded yes, in terms of their firm's experience or in their trade. Several respondents indicated that this was as much a planning function as a market function.

It was stated in Chapter 3 of this report that the number of apprentices had declined in recent years. Department staff believe this may be due primarily to reduced activity in the construction field. In Table 29, we show year over year changes in enrollments, completions and number of journeymen. We were also supplied with Unemployment Insurance Claims and Vacancy Notifications data by C.E.I.C. - Fredericton Regional Office (Table 30). For several reasons these data are difficult to relate to the operation of the apprenticeship system. For example, Vacancies Notified to a Canada Employment Center (C.E.C.) do not accurately reflect the labour market, in that

a) The friendship network is strong in the designated trades.
b) The posting and bidding system in industrial union situations is used to fill those vacancies.
c) Craft unions in construction act as hiring halls.
d) As we saw above, many employers go directly to Community Colleges for referrals.

TABLE 29 YEAR OVER YEAR CHANGES IN APPRENTICESHIP ACTIVITY

(SOURCE: DEPARTMENT OF ADVANCED EDUCATION AND TRAINING)

CCDO CODE	TRADE	1984-85 REGISTRATIOS	1984-85 COMPLETIOS	1985-86 REGISTRATIOS	1985-86 COMPLETIOS	TOTAL JOURNEYMAN
2161 122	SURVEY TECHN &	--	--	--	--	--
	SURVEY TECH(CARTOG)					
	SURVEY TECH(INSTR)					
	SURVEY TECH(PHOTO)					
2163 110	DRAFTSMAN	--	--	--	--	28
2163 126	DRAFTSMAN (ARCH)	--	1	1	1	43
2165 142	ENG. ASSISTANT	--	2	--	--	19
2165 226	POWER SYST. OPER.	1	1	--	--	7
5145 110	SERV STA. ATTEND	--	--	--	--	23
6111 126	FIREFIGHTER	7	13	15	14	373
6121 128	COOK	59	29	52	28	455
6143 114	BARBER	44	24	53	27	890
7713 119	WATERWELL DRILLER	9	--	2	--	41
8313 154	MACHINIST	24	14	26	7	411
8333 118	SHEET METAL WORKER	5	10	6	1	291
8335 126	WELDER	31	25	19	13	637
8337 110	BOILERMAKER	--	2	7	--	121
8337 114	STEEL FABRICATION	3	8	4	6	124
8527 188	STAKER-DETAILER	--	--	6	--	24
8531 296	ELEC. MOTOR WINDER	3	53	1	--	44
8533 110	INDUSTRIAL ELECTR	28	28	14	20	726
8533 118	REFRIG & AIR COND.	10	14	14	4	174
8533 126	APPLIANCE SERVICE	1	--	2	--	98
8535 114	RADIO & T V TECH	--	--	--	--	74
8541 110	CABINETMAKER	2	3	4	--	127
8563 114	JOINERY	--	--	--	--	14
8581 110	M V MECHANIC &	156	42	113	46	3820
	M V M(TRUCK & TRANS)	33	8	33	10	1245
	TRUCK/TRAILER REP	--	--	--	--	72
8581 122	M V (TRANSMISSION)	--	--	1	--	16
8581 135	M V (FUEL/ELECTRON)	3	--	3	1	99
8591 142	M V BODY REPAIR	28	14	35	8	410
	M V BODY REP(METAL)	3	1	3	1	79
	M V BODY REP(PAINT)	1	--	4	--	39
8581 155	M V(STEER,SUSP,BRK)	4	5	10	3	320
8584 112	H. D. EQUIP MECH	48	25	23	24	1087
8584 122	IND. MECH.(MILLWR)	53	43	61	42	1711
8585 110	PAINTER & DECOR	5	2	11	2	217
8588 119	IND. INSTRUMENT MECH	2	12	11	4	211
8589 144	SMALL EQUIP MECH.	7	--	5	--	104

8589 299	PROD. EQUIP. MECH.	--	--	11	--		53
8592 110	BOILERMAKER MARINE	--	--	--	--		9
8592 134	SHIPS PLATER	--	--	--	--		26
8592 134	MARINE ENGINE FITTER	--	--	--	--		40
8731 118	LINEMAN	--	--	--	--		360
8733 110	MARINE ELECTRICIAN	--	1	--	1		117
8733 111	LINEMAN(CONST)	16	8	22	--		219
8733 114	AIR COND. & REFRIG.	10	14	14	4		174
8733 122	CONST. ELECTRICIAN	89	49	125	40		3025
8739 123	ELEC. MECH. (UTIL.)	2	2	1	2		38
8781 110	CARPENTER	87	35	107	43		2456
8782 110	BRICKLAYER	8	--	!0	5		401
8786 114	INSUL (HEAT&FROST)	18	--	3	--		70
8787 119	ROOFER	5	1	2	3		127
8791 110	SPRINKLER INSTALL &	3	2	2	6		39
	STEAM/PIPE FITTER	19	21	7	20		1659
8791 114	PLUMBER	40	20	38	16		1708
8799 399	OIL BURNER MECH. &	9	1	5	4		291
	HEATING TECHNICIAN						
9531 122	SWITCHBOARD OPERATOR	2	--	1	1		--
9531 154	DISPATCHER &	--	--	--	--		8
	SWITCHER,ELEC POWER						
9533 122	STATIONARY ENG. &	43	51	40	17		263
	STATIONARY ENG. 2						
	STATIONARY ENG. 3						
	STATIONARY ENG. 4						

Table 30 U I Claimants (1985-1987) and Vacancies Notified in Apprenticeable Trades
(Source: CEIC Fredericton Regional Office)

CCDO		TITLE	U.I. CLAIMS									VACANCIES
			1985				1986				1987	APR. '86 - MAR. '87
4-digit	7-digit		Q I	Q II	Q III	Q IV	Q I	Q II	Q III	Q IV	Q I	
2161	122	SURVEY TECHNOLOGIST & SURVEY TECH. (CARTOG.) SURVEY TECH. (INST.) SURVEY TECH. (PHOTO)	96	97	89	57	80	73	56	37	83	14
2163	110	DRAFTSMAN	31	27	26	25	35	37	29	26	31	10
2163	126	DRAFTSMAN (ARCH.)	15	16	14	15	14	12	9	8	7	16
2165	142	ENG. ASSISTANT	16	16	13	15	14	13	10	12	30	12
2165	226	POWER SYST. OPER.	3	4	5	5	4	4	3	4	0	0
5145	110	SERV STA. ATTEND.	224	211	163	154	158	136	110	85	94	46
6111	126	FIREFIGHTER	7	7	7	9	11	11	8	9	10	17
6121	128	COOK	14	10	9	3	8	6	4	3	4	1
6142	114	BARBER	32	26	25	27	31	26	29	29	32	27
7713	119	WATERWELL DRILLER	1	1	1	1	2	2	1	1	0	0
8313	154	MACHINIST	136	135	167	134	139	105	78	104	150	26
8333	118	SHEET METAL WORKER	244	226	241	241	286	268	228	232	230	14
8335	126	WELDER	538	553	438	416	445	434	388	406	461	62
8337	110	BOILERMAKER	72	69	91	75	69	91	79	79	101	0
8337	114	STEEL FABRICATION	6	6	5	3	2	2	2	1	1	1
8527	186	STAKER-DETAILER	1	0	0	0	0	0	0	0	0	.
8531	296	ELEC. MOTOR WINDER	2	3	4	2	0	0	1	1	1	0
8533	110	INDUSTRIAL ELECTRICIAN	14	13	18	18	17	16	20	21	23	13
8533	118	REFRIG. & AIR CONDIT.	42	42	26	26	32	27	21	21	21	15
8533	126	APPLIANCE SERVICE	17	25	24	28	28	25	19	17	24	16
8535	114	RADIO & TV TECH.	25	23	16	17	17	10	11	9	9	20
8541	110	CABINET MAKER	101	94	77	65	83	79	55	55	71	22
8563	114	JOINER	66	61	55	51	81	105	135	167	257	242
8581	110	M. V. MECHANIC & M.V.MECH.(TRUCK & TRAIL.) TRUCK/TRAILER REPAIR	522	481	337	410	547	515	362	446	606	178
8581	122	M. V. (TRANSMISSION)	8	8	9	11	12	9	4	3	5	1

8581	135	M. V. FUEL/ELECTRONICS	0	0	0	0	1	1	1	1	0	0
8581	142	M. V. BODY REPAIR M. V. BODY REPAIR (METAL) M. V. BODY REPAIR (PAINT)	281	250	164	199	285	264	192	217	254	50
8581	155	M. V. (STEER,SUSP.,BRAKE)	1	1	1	0	0	0	0	1	3	0
8584	112	H. D. EQUIP. MECH.	123	126	100	122	137	112	78	72	81	42
8584	122	IND. MECH. (MILLWR.)	294	277	281	280	236	203	222	226	246	33
8585	110	PAINTER & DECORATOR	2	1	0	1	2	2	1	4	10	1
8588	119	IND. INSTRUMENT MECH.	4	6	4	5	3	1	2	1	0	0
8589	144	SMALL EQUIP. MECH.	30	28	24	27	30	26	15	14	18	17
8589	299	PROD. EQUIP. MECH.	14	12	16	9	17	16	16	22	27	4
8592	116	BOILERMAKER MARINE	2	2	1	2	2	1	1	1	0	0
8592	126	SHIPS PLATER	64	60	47	42	35	41	44	29	16	2
8592	134	MARINE ENGINE FITTER	16	14	14	14	9	13	12	11	18	6
8731	118	LINEMAN	33	33	25	29	41	46	37	30	34	12
8733	110	MARINE ELCTRICIAN	14	15	15	16	16	13	13	8	10	0
8733	111	LINEMAN (CONST.)	1	1	4	4	7	5	3	2	0	0
8733	114	AIR CONDIT. & REFRIG.	2	2	3	3	4	2	2	2	4	1
8733	122	CONSTR. ELECTRICIAN	575	525	551	565	559	536	528	579	692	87
8739	123	ELEC. MECH. (UTIL.)	0	0	0	0	0	0	0	0	0	0
8781	110	CARPENTER	3073	2954	2323	2507	3263	3228	2640	2933	3757	458
8782	110	BRICKLAYER	394	394	306	306	382	374	308	308	360	54
8786	114	INSULATOR (HEAT & FROST)	49	48	42	40	46	44	47	46	52	1
8787	119	ROOFER	5	4	3	3	3	4	1	1	3	0
8791	110	SPRINKLER INSTALLER & STEAM/PIPE FITTER	403	384	456	450	440	430	452	515	557	13
8791	114	PLUMBER	231	228	191	176	210	204	171	163	186	33
8799	299	OIL BURNER MECH. & HEATING TECHNICIAN	2	1	1	0	0	0	0	0	1	0
9531	122	SWITHBOARD OPERATOR	1	0	0	1	2	2	2	1	3	0
9531	154	DISPATCHER & SWITCHER,ELEC POWER	0	0	0	0	0	0	0	0	0	0
9535	122	STATIONARY ENG. & STATIONARY ENG. 2 STATIONARY ENG. 3 STATIONARY ENG. 4	136	141	152	146	133	116	119	109	98	26
TOTAL			6442	7654	6392	6757	7395	7839	6585	7073	8719	1389

In other contexts the extent of a C.E.C. share of labour market activity has been estimated at about one-third.

Also, it is not clear that the occupation stated by U.I. claimants accurately represent this status. For example, approximately 3,000 claimants are registered as carpenters in almost every quarter of 1985 and 1986. This represents the entire carpentry work force in the province according to journeymen registry figures. As a result, we believe the opinions of our survey respondents are as valid indicators as the data.

Nevertheless, it is possible to identify probable imbalances. Even though carpentry figures appear inaccurate, the order of magnitude suggests a serious over supply. The same is true for bricklayer, construction electrician, plumber, steam and pipefitter, cook, and maybe welder. Occupations in short supply based on this comparison include ships platers, small equipment mechanic, possibly motor vehicle body repair, and a field of occupations related to surveying and to drafting. From Table 30, vacancies exceed or match supply only in Draftsman (Architecture), Firefighter, Barber, Steel Fabrication, Radio and TV Technician and Small Equipment Mechanic. Comparing registrations with vacancies notified, it appears that greater effort is warranted in Drafting, Firefighting, Radio and TV Technician, and Small Equipment Mechanic.

An attempt at greater accuracy in forecasting occupational shortages and surplus is Forward Occupational Imbalance Listing (FOIL). The next series of tables display these imbalances. Table 31 shows those trades in which supply exceeds demand. Roofer corresponds directly to a designated trade, but the seven digit code was not listed. Table 32 shows the trades in which demand exceeds supply. In both lists some occupational codes include more than one apprenticeable trade. An additional 11 trades are forecast as shortage occupations, but the more precise (7 digit) trade was not identified, Table 33.

A further effort is made to identify skill shortage occupations for purposes of CJS, called the Designation List of the Skill Shortage Program. Table 34 makes the comparison between this list and the list of designated trades. Because the data are at the less precise 4-digit level, the correspondence is not direct. Eight occupations are listed which represent 12 apprenticeable trades and a number of apprenticeable motor vehicle "splintered" apprenticeable trades. The three entries marked * represent trades in shortage for upgrading or learners level only.

Welder appears on both the Skill Shortage list and the FOIL surplus list. The probable explanation relates to the level of precision between 4-digit and 7-digit entries.

Table 31. Apprenticeable Trades indicating Surplus by 7-Digit Code (FOIL)

CCDO CODE		Registrations 1985-1986
2161 122	Survey Technologist	0
2163 110	Draftsman	0
5145 110	Service Station Attendant	0
8313 154	Machinist	26
8333 118	Sheet Metal Worker	6
8335 126	Welders	19
8337 110	Boilermaker	7
8584 112	Heavy Duty Equipment Mechanic	23
8733 122	Construction Electrician	125
8781 110	Carpenters	107
8786 114	Insulator (Heat and Frost)	3
8791 110	Sprinkler Installer & Steam/Pipe Fitter	9
8791 114	Plumber	38
9533 122	Stationary Engineer General	40
8787	Roofer	2

Table 32. Apprenticeable Trades That Rank Shortage by 7 Digit CCDO Code (FOIL)

CCDO CODE		Registrations 1985-86
2165 142	Engineering Assistant	0
2165 226	Power System Operator	0
8337 114	Steel Fabrication	4
8533 110	Industrial Electrician	14
8533 118	Ref. and Air Conditioner Mechanic	14
8533 126	Appliance Service	2
8535 114	Radio & T.V. Tech.	0
8541 110	Cabinet Maker	4
8563 114	Joinery	0
8581 110	M.V. Mechanic and M.V. Mechanic (Truck and Transport) and Truck and Trailer repair.	146
8581 142	M.V. Body Repair, M.V. Body Repair (Metal) and M.V. Body Repair (Paint)	42
8584 122	Industrial Mechanic Millwright	61
8733 110	Marine Electrician	0
8799 399	Oil Burner Mechanic and Heating Tech.	5
9533 122	Stationary Engineer Class 2	not itemized

Tables 31 and 32 indicate apprenticeship is responding appropriately in some cases, e.g. Survey Technologist, Roofer, M.V. Mechanic, Millwright, and inappropriately in others e.g. Construction Electrician, Carpentry, Engineering Assistant, Marine Electrician.

Table 33 Apprenticeable Trades That Indicate Shortage by 4 Digit CCDO Code (FOIL) - 7 Digit Not Listed

CCDO CODE	
8531	Electric Motor Winder
8581	M.V.M. (Transmissions)
8581	M.V.M. (Fuel and Elec)
8581	M.V.M. (Steering, Susp. and Brakes)
8588	Industrial Instrument Mechanic
8589	Small Equipment Mechanic
8589	Production Equipment Mechanic
8592	Marine Boilermaker
8592	Ships Plater
8592	Marine Enginefitter
8733	Ref. and Air Conditioner

Table 34 Trades Common to Both CJS Skill Shortage List and Apprenticeship Program 7-Digit CCDO Code

CCDO CODE	TRADE	Registrations 1985-86
8535 114	Repair Person Electronic Equipment	0
8581 110	Motor Vehicle Mechanic*	146
8581 142	Body Repairperson*	42
8733 110	Marine Electrician*	0

*Upgrading in that trade.

It appears from the tables that apprenticeship offerings and registrations do not correspond directly with identified supply-demand situations. As a first step, the reasons for these discrepancies should be determined and then efforts should be made to balance effort with need.

E. Summary and Conclusions

In New Brunswick, there are 68 designated trades. We have shown the list on Page 9 of the report. For the most part, these are heavy industry or construction oriented, and are able-bodied-male dominated. Across Canada, there are perhaps twice as many trades designated, still usually (though not entirely) in the same narrow range of work type. In some European countries five times as many occupations may be apprenticeable. There are a number of competitive suppliers of training in Canada which have emerged to satisfy demand in many occupations. It should be the purpose of apprenticeship planners to identify trades which do not have some satisfactory training system, and which might be improved by an association with the apprenticeship system. The characteristics of occupations which might be examined would include high skill but low pay, significant training need but high turnover, significant to health and safety but lack of training, and similar imbalances.

In Chapter 4 above, where we compared the features of the CJS and the apprenticeship system, we noted four points on which apprenticeship did not match up. Those were:

- target group participation
- meeting skill shortages
- emerging labour market needs
- layoffs due to technological change

In that same chapter, we concluded that target groups were under represented, and recommended measures to correct that.

Now we can conclude that apprenticeship is responding, but perhaps too slowly to technological change. We were told of this especially in Electrical and in Automotive trades. However, we did not receive evidence of adding trades in response to entirely new jobs or fields or in response to markets such as growth in computers or bio-technology or in tourism or security services. At the same time, we did see evidence of failure to revise curriculum or job content to keep up with changing technology and market trends.

We, therefore, must conclude that apprenticeship is capable of revising itself, but that a greater effort is required to do so, across the range of existing designated trades, plus any that are to be added. As to whether this may act to reduce layoffs due to technological change for both apprentices and journeymen, the method is not oriented in this fashion. It should be considered an entry system, though the same training facilities and methods could be used to upgrade journeymen if the facilities are made available.

Under the 1986 Canada - New Brunswick Training Agreement, a list of skills in short supply and high demand in the New Brunswick region is maintained. To some extent, there is a coincidence between this list and the list of designated trades. Also, some skill shortages relate directly to part of a designated trade. If it can be shown that these skill shortage listings are not transitory and have a significant training component, the apprenticeship system should consider how it could assist in addressing the imbalances of supply or demand.

F. Recommendations

8. On Page 74 of the report, we suggested some characteristics which could apply to new trade designations. A specific criterion should be long term projected high demand and low supply. The designation process should be formalized.

9. The Department of Advanced Education and Training should begin efforts to moderate the supply and demand of trades people based on planning information:
   a) Several excess trades might have a beginning class every second year both for pre-employment and indenturing.
   b) Candidates should be counselled to enter similar shortage occupations, especially in the off years.
   (See also Recommendation 2)

10. The attempt to standardize training content and sequences, tried by Maritime provinces, should be revived and extended across the country, for Red Seal Trades.

11. To respond to changing technology, the apprenticeship system should try always to be in-step with existing technology as it affects trade content practice, new occupations and threats of layoffs to workers. In the interests of graduates of the system (journeymen) somebody should be designated to ensure that re-training is made available.
   (See also Recommendations 3 and 4)

At several points in this report, there were references to the need for apprenticeship to revise itself in order to respond to changing technology and other pressures. This response must be preceded and supported by a planning function within the Department of Advanced Education and Training, and supported by the Industrial Training and Certification Board.

12. The Industrial Training and Certification Board should be re-constituted to include more members including representatives of target groups. The board should initially be mandated to study and implement the recommendations of this report as they relate to the means of including more target group members in apprenticeship and for responding to labour market needs. Under the coordination of the chief executive officer of the board, the planning function should be seen as a continuing long term activity.

CHAPTER 7

FUNDING THE PROGRAM

A. Cost of the Apprenticeship Program

The Federal and Provincial Governments share the cost of the apprenticeship program. Together they pay for all direct costs involved in training of an apprentice. The direct costs involved are the actual in-school training cost and income support in terms of unemployment insurance or allowances. Apart from the direct cost of training, the apprenticeship program also requires considerable administrative expenses.

Administration pertaining to direct purchases of institutional training as provided directly by the Provincial Government is essential to the quality, effectiveness and efficiency of the training programs purchased and funded in major part by the Federal Government.

The breakdown of the Federal and Provincial Government expenditures is given below. There was more actual data available for 1985/1986 than 1986/1987.

B. Federal Expenditure

The Federal Government provides a large portion of the funding for the in-school training program. In the case of apprentices, this in-school training program refers to the block release portion. The Government purchases a number of seats in each trade under the direct purchase option.

When the Apprentices are undergoing the in-school training program, they are off the job for approximately six weeks. During this training period when the apprentices are not earning they are supplemented with income support by the Federal Government. This income support could be U.I. or allowances, which includes income support, dependent care, living away from home and commuting.

The Federal Government also contributes to the administration of the apprenticeship program an amount equal to four percent of the funds used for the purchase of in-school training for apprentices in that year. It also contributes to the general administration through its regional office staff and network of CEC staff responsible for apprenticeship documentation, mobility assistance, and income support arrangements. Approximately one third of the direct purchase (institutional training) client and contract documentation activities is on behalf of apprenticeship training. Thus, while isolated funding figures for CEIC administrative support for apprenticeship is not available, the contribution is significant. Unlike other direct purchase courses the decision to recommend clients for apprenticeship rests with apprenticeship officials of the Department of Advanced Education and Training.

Table 35 gives the total Federal expenditures on apprenticeship for the two fiscal years 1985-1986 and 1986-1987. The figures for 1985-1986 are actual whereas some of the figures for 1986-1987 are budget figures since the final reports for 1986-1987 have not been compiled yet.

TABLE 35 Total Federal Expenditures on Apprenticeship
(Source: CEIC - Fredericton Regional Office)

		1985-1986	1986-1987
1.	Training (Direct-purchase option)	$1,981,273	$2,452,019
2.	*Provincial Admin. (4% of Training Cost)	79,251	98,081
3.	U.I. Expenditures	1,233,236	1,419,655 (estimate)
4.	**Allowances	788,430	1,054,758
	TOTAL	$4,082,190	$5,024,513

* Federal Administration figures not available.
** Allowances includes income support, dependent care, living away from home and commuting.

The amount spent on allowances for 1986/87 is higher than for 1985/86 due to overall changes in the allowance system from 1985/86 to 1986/87. The U.I. expenditure is not necessarily all spent on apprenticeship since it could go towards apprentices that would be receiving U.I. in any event.

Taking the figure 1,966 (from 1985-86 annual report) as the actual number of apprentices trained in 1985/86, we can calculate the average Federal cost of training an apprentice as:

$$\text{Overall Cost of Training an Apprentice} = \frac{\text{Total Cost (with income support)}}{\text{No. of Apprentices Trained}}$$

$$\$2,076.00 = \frac{4,082,190}{1,966}$$

The next two tables, Table 36 and Table 37 show a detailed breakdown of the training expenses under the direct purchase option by trade.

Table 36 gives the number of places purchased, number of days of training purchased and Federal cost of training purchased in both 1985/86 and 1986/87 for full time apprentices. For 1985/86, we also have shown the total cost of training for each trade. The direct purchase of training expense also includes the books and clothing expense.

Table 37 gives the same information as Table 36, but for part-time apprentices.

Table 36 Breakdown of Federal Funding by Trade
For Full-Time In-School Training

Source: CEIC Fredericton Regional Office

TRADE	1985-86 NO. OF PLACES	1985-86 NO .OF DAYS	1985-86 FEDERAL COST $1000	1985-86 TOTAL COST $1000	1986-87 NO. OF PLACES	1986-87 NO. OF DAYS	1986-87 FEDERAL COST $1000
COOK	64	1873	62.5	67.3	78	1971	71.5
WATER WELL DRILLER	7	245	15.5	13.5	8	245	7.9
MACHINIST	45	900	44.9	51.4	63	1250	57.6
WELDING	44	1878	99.8	109.8	47	2397	130.7
STEEL FABRICATOR	8	232	8.3	11.3	10	290	14.4
SHEET METAL	33	864	34.2	90.6	38	1050	43.7
STAKER DETAILER	5	100	7.2	7.9	5	100	6.4
MVR BODY REPAIRER & PAINTER	34	1612	58.6	101.2	34	1511	52.4
MVR TRUCK & TRANSPORT	29	1759	68.5	83.1	40	1998	93.7
INDUSTRIAL MECHANIC	132	4052	172.7	206.6	148	3779	184.3
MOTOR VEHICLE REPAIR MECHANIC	354	9384	358.3	356.8	323	10116	380.5
INDUSTRIAL INSTRUMENTATION	21	531	25.1	41.1	21	723	26.3
HEAVY EQUIPMENT REPAIR	122	3442	136.5	149.9	107	3043	123.3
ELECTRICAL CONSTRUCTION	270	7767	254.2	454.6	119	3439	125.9
INDUSTRIAL ELECTRICAL	54	1349	44.2		29	927	33.9
CONSTRUCTION LINEMAN	42	1106	41.7	44.1	70	1606	102.1
REFRIGERATION & A.C	43	1296	48.5	52.1	72	1904	88.2
ELECTRIC MECHANIC	10	200	11.7		128	6694	252.3
OPERATING LINEMAN	18	450	16.4	19.6	26	600	38.1
BRICKLAYING	17	679	22.8	19.7	16	845	29.9
CARPENTRY	95	5497	189.9	211.3	112	5819	212.2
PAINTER & DECORATOR	14	296	8.5	15.7	10	240	9.3
HEAT & FROST INSULATOR	18	484	17.9	18.7	11	200	8.9
STEAMFITTER & PIPEFITTER	29	1581	60.8	61.1	35	1807	85.4
PLUMBING	60	2959	107.4	103.3	61	2520	98.5
OIL BURNER MECHANIC	3	178	7.1	6.9	7	286	10.9
STATIONARY ENGINEER	57	1585	53	73.3	87	2690	105.3
ELECTRICAL APPLIANCE REPAIR					1	152	5.7
CARPENTRY UPGRADING					13	715	13.8
BRICKLAYING UPGRADING					13	221	2.7
TOTAL	1628	52299	$1,976,253	$2,370,990	1761	60156	$2,444,002

* TOTAL COST FIGURES WERE EXTRACTED FROM REPORTS PROVIDED BY DEPARTMENT OF ADVANCED EDUCATION AND TRAINING.

Table 37 Breakdown of Federal Funding for In-School Training - Part Time

(Source: CEIC Fredericton Regional Office)

	1985-86			1986-87		
TRADE	NO. OF PLACES	TRAINING DAYS	COST $	NO. OF PLACES	TRAINING DAYS	COST $
	7	140	585	3	60	365
COOK HOME STUDY	3	60	118	5	100	211
BARBERINE HOME STUDY	1	20	204	2	40	477
MACHINIST HOME STUDY	2	40	239	2	40	347
STEEL FABRICATOR H.S	2	40	309	2	40	372
SHEET METAL H.S	5	100	629	4	80	999
CABINET MAKING H.S	2	40	274	6	120	1887
INDUSTRIAL MECHANIC H.S	5	100	225	3	60	157
SMALL EQUIPMENT REPAIR H.S	3	60	624	4	80	882
MVR MECHANICAL H.S	4	80	344			
REF & A.C H.S	1	20	86			
STATIONARY ENGINEER - CORRS	15	300	1234	16	320	1382
FIRE FIGHTER H.S				4	80	87
ELECTRIC MOTOR REPAIR H.S				3	60	651
MVR MECH ELEC & FUEL				1	20	94
HEAVY EQUIPMENT REPAIR				4	80	896
PAINTING & DECORATING				1	20	100
TOTAL	50	1000	$5,320	60	1200	$8,317

The number of places purchased in Table 36 and 37 does not exactly reflect the number of apprentices trained. Since places purchased can have more than one apprentice, there are usually more apprentices trained than number of places. The figure of 1,966 which is the actual number of apprentices trained in 1985-86, is 15% higher than the number of places purchased.

Taking the direct-purchase cost figures from Table 36 and 37, we calculate the average cost of in-school training without income support for an apprentice is approximately $1,209.00. The amount the Federal Government pays towards each apprentice's training is $1,008.00 This indicates that the Provincial Government paid $201.00 towards each apprentice's in-school training in 1985-86.

Apprenticeship consumed 5% of the overall Federal training expenditures of over 67 million dollars in New Brunswick in 1986-87, but this is a significantly greater proportion of the more directly comparable direct purchase option (22.7%). The Federal Government spent $22,121,670 on direct purchase training and allowances.

Table 38 Breakdown of CJS Direct Purchase Expenditures for 1986-1987
(Source: C.E.I.C. - Fredericton Regional Office)

PROGRAM	COURSE COST*	ALLOWANCES	TOTAL	PARTICIPANTS
Job Entry	$ 1,440,027	$ 949,075	$ 2,389,102	582
Skill Shortage	3,249,302	1,145,232	4,394,534	2,039
Job Development	10,573,048	4,452,769	15,025,817	2,435
Skill Investment	297,902	14,315	312,217	187
	$15,560,279	$6,561,391	$22,121,670	5,243

* Includes Provincial Administration

Using these total expenditure figures and total trainees under the Skill Shortage Program which includes apprentices training cost per person is:

$$\frac{4,394,534}{2,039} = \$2,155$$

We are unable to carry this calculation further to compare the cost of training apprentices with that of other training, since the data are not further disaggregated by the two departments. It should be borne in mind that apprentice training is only for six weeks each year, while Skill Shortage Training may be for longer periods, and be part time. The two programs are not directly comparable.

C. Provincial Expenditure

In order to complement Federal contributions, the Provincial Government provides a certain amount of funding towards the actual training expenses of the apprentices. In 1985-86, this was $394,738.00 or 17%. Apart from the training, the Province administers the Apprenticeship Program through the Department of Advanced Education and Training.

There is no financial information presented in 1986/87 since it had not all been compiled at time of writing. All the data presented is for 1985/86. Below are shown the provincial expenditures on apprenticeship training and administering of the program. The accounting system in the Department of Advanced Education and Training does not provide a detailed break-out of the expenditure for apprenticeship.

The Provincial Government also received $11,395.00 in revenue from the apprenticeship and CQ examination fee. Taking that into account, the Province spent the following amount towards apprenticeship in 1985/86.

EXPENSES	
Training	$ 394,638
Administration	1,385,330
	$1,780,068
REVENUE	
Federal Government Contribution towards administration	$ 79,251
Examination Fee	11,395
	$ 90,646
Total Provincial Expense for Apprenticeship	$1,689,422

D. Comparison of the Federal and Provincial Expenditure

For comparison purposes, taking into account the Federal expenditure on allowances and U.I., Table 39 shows the Federal and Provincial contributions towards direct-purchase of training and the administration of the apprenticeship program.

Table 39 Total Expenditures on Apprenticeship Training by Source and Application, 1985/1986

	SOURCE		
APPLICATION	Federal	Provincial	Total
Training	1,981,273	394,738	2,376,011
Administration	79,251	1,306,079	1,385,330
Income Support			
Allowances	788,430	---	788,430
U.I.	1,233,236	---	1,233,236
Total Cost	4,082,190	1,700,817	5,783,007
Share	70.6%	29.4%	100%

The foregoing data pertaining to the funding of the apprenticeship program was provided by the Department of Advanced Education and Training and the C.E.I.C. Fredericton Regional Office. The information above provides a financial picture of the Apprenticeship Training and Certification Program. In addition to the examination of financial documents and analysis of the data, the three surveys which were conducted addressed various issues including funding and relative contributions to the system.

Financing and sharing the costs of apprenticeship was not well known or understood by official respondents. It is simply considered a necessity and a public good by most of those involved. Consultants were equally unable to make a total program cost estimate, primarily because the value of inputs by workers and employers is unmeasurable, and because even the total of provincial inputs are not accounted for.

E. Relative Contributions of Parties

We did, however, attempt to determine among all types of respondents whether the effort devoted to the system was adequate, whether their own contribution was adequate and what would likely result from reducing or redistributing the government share of the burden.

Only employers and officials were asked to comment on the overall effort devoted to apprenticeship training. At least one-half of officials believe government is now making enough effort. Other responses ranged over how, where and if certain changes could be made. Table 40 shows the opinion of employers on this question. Fifty-four percent believe it is enough now and just over one-third say it is too little.

TABLE 40 Employers Opinions Regarding Adequacy of Financial Effort For Apprenticeship.

Value Label	Frequency	Percent
RESPONSE	5	4.5
O MUCH	7	6.3
OUT RIGHT	60	54.1
O LITTLE	39	35.1
	111	100.0

Leading up to the question of re-distribution, employees and employers estimated their own and each others share. In Table 41 we see that employees believe they make a contribution, that it is a fair contribution, but that the majority (59%) would be willing to contribute more if it became necessary. In Table 42 we see that this same group understand the contribution made by employers and 70% believe that it is about right.

TABLE 41 Workers Perception and Attitude Toward Their Contribution to Apprenticeship.

	Value Label	Frequency	Percent
Do you make a contribution?	NO RESPONSE	1	.8
	YES	108	90.8
	NO	9	7.6
		1	.8
		119	100.0
Do you consider it appropriate?	NO RESPONSE	6	5.0
	TOO MUCH	20	16.8
	ABOUT RIGHT	89	74.8
	NOT ENOUGH	4	3.4
		119	100.0
Would you contribute more?	NO RESPONSE	1	.8
	YES	70	58.8
	NO	48	40.3
		119	100.0

TABLE 42 Workers Perception and Attitude Toward the Contribution of Employers to Apprenticeship.

	Value Label	Frequency	Percent
Do you think your employer contributed?	YES	93	78.2
	NO	26	21.8
		119	100.0
Was the employer' contribution appropriate?	NO RESPONSE	25	21.0
	TOO MUCH	1	.8
	ABOUT RIGHT	83	69.7
	NOT ENOUGH	10	8.4
		119	100.0

Table 43 shows the attitudes of employers about their contribution to the system. Over 80% counted both wages and supervision during on-the-job training as a training contribution. Just under 20% counted the supervision alone, apparently concluding that wages were earned for a production input. Concerning their contribution during Block Release, 19% admit to making no contribution, 14.4% report "topping up" wages, while 60% count holding the job open (presumably due to lost production) as a contribution during this period. Over 90% feel their contribution is appropriate while 22% would agree to contribute more.

TABLE 43 Employers Attitudes Toward Their Contributions

	Value Label	Frequency	Percent
Is your contribution appropriate?	NO RESPONSE	4	3.6
	TOO MUCH	3	2.7
	ABOUT RIGHT	101	91.0
	NOT ENOUGH	3	2.7
		111	100.0
Would you contribute more?	NO RESPONSE	5	4.5
	YES	24	21.6
	NO	82	73.9
		111	100.0

For the most part (80%), these respondents also believe that apprentices are making an appropriate contribution.

TABLE 44 Employer's Opinion Regarding the Apprentices Contribution to the System.

Value Label	Frequency	Percent
NO RESPONSE	1	.9
TOO MUCH	3	2.7
ABOUT RIGHT	89	80.2
NOT ENOUGH	18	16.2
	111	100.0

These opinions would appear to represent quite serious resistance to any voluntary re-distribution of effort.

Both groups were asked to indicate where government could cut back if it wanted to. Interestingly, seven employees suggested cutting back on classroom training, but even more startling, five said to cut training allowances. Seven employers concurred with the latter. However, in each group most people avoided the question and said government could not or should not cut back. Among workers, 79 said they should not cut and 21 said it should be increased. Among employers, 83 said to cut nowhere. Among useful responses were:

- Cut those trades in surplus.
- Increase efficiency such as use centralized facilities.
- Increase admission standards so as not to waste training dollars.
- Improve the quality of on-the-job training to reduce classroom portion.

The consensus attitude expressed was fear that any reduction in financing would result in a reduction in quality on the one hand and of access on the other.

F. Summary and Conclusions

The system is apparently adequately funded now, and each contributing party believes itself and the others are sharing the burden appropriately, except perhaps the sharing between the two governments. If there were to be a major reduction or re-distribution many participants and users fear it would damage the system.

The Federal Government now finances apprenticeship through direct purchases of training and through providing income support. The Provincial Government pays for administering the system, supervising training, preparing courses and examinations and for documenting the process. Most of our informants feel these efforts and shares to be adequate and appropriate. Apprentices contribute to their training through lower wages during on-the-job training, lost wages during Block Release, some travel and other expenses. Employers pay through lower productivity, increased supervision, waste of materials and other direct costs. Some employers pay the full wage during Block Release. Respondents generally believe these are solid contributions but are worth the cost for the benefits received. Many would pay more if necessary, but especially apprentices said so.

The Federal contribution should not be seen as the support of a system but as support for individual Canadians who need training or trained personnel. Its withdrawal from or partial transfer of responsibility for the program is clearly not a solution to those problems.

Employers and employees both believe that reduced funding will result in lower quality. Certainly this follows directly in terms of technological changes, where schools now cannot afford to update industrial equipment.

While employees expressed a willingness to contribute more, some stated they could not, thus presenting another unfair obstacle to wider participation.

For the most part, skills in the designated trades are transferrable among employers, thus employers support training through taxation for a share of the benefits. If financing is reduced employers will likely sort themselves into two categories: those who do not train plus those who train for their own narrow needs in order to prevent pirating by the first group. Worker mobility will certainly suffer from this outcome.

But there are financial moves the CEIC can make jointly with the apprenticeship system. Rather than reduction, continued participation should be directed toward quality, efficiency and equity.

Recommendations

i. Appropriate Role of the Government and Participants

The apprenticeship system fills an important niche in the occupational training of Canadians. We conclude along with our informants that the continued active involvement of all current participants is necessary, especially if the kind of recommendations for improvement we make are to be implemented.

13. The Federal Government should remain involved in the same manner and at about the same financial level as now. CEIC should establish a CJS program dedicated to apprenticeship. However, it should negotiate the improvements that it deems necessary to reach its policy goals, regarding equity, labour market efficiency, and technological quality.

14. The Provincial Government should be prepared to maintain its present involvement, augmented by stronger basic education, increased consultation, with stricter enforcement of selection criteria plus more on-the-job training supervision, and closer adherence to labour market feedback in terms of numbers.

15. Both employers and employees must make a renewed commitment to quality training and to each other in the system, but no increase in direct cash contributions are recommended. (See Recommendation 1)

16. Employers should ensure as much as possible that apprentices are allowed to attend Block Release when scheduled, that they give proper rotation and skill exposure, provide good supervision, and that apprentices are kept on rather than being laid off early. If at all possible, employers should establish or enter into Training Trust Funds.

APPENDIX 1

APPENDIX 1

LIST OF PEOPLE INTERVIEWED

Ron Scott	Scott Brothers	Rothesay
Michael Myles	St. John Ship Building	Saint John
Robert Lanteigne	CIL Chemical	Dalhousie
Ted Duguay	Maritime Welding	Bathurst
Keith Pitcher	Canadian Tire	Dieppe
R. Scott	E.S. Stevenson	Saint John
H. Hindle	E.S. Stevenson	Saint John
Mark Trask	Moosehead Breweries	Saint John
Bruce MacPherson	N.B. Tel	Saint John
Mr. Stultz	Canadian Mfg. Association	Moncton
Tim McCarthy	N.B. Fed. of Labor	Newcastle
Albert Heckel	Miramichi Community College	Chatham
Mr. B. Dickie	C.E.I.C.	Moncton
Mr. L. Robichaud	Consolidated Bathurst	Bathurst
Alyre Arsenault	Galryc Ltd.	Moncton
Fraser MacLeod	Connors Bros. Ltd.	Black's Harbor
Glenda Godin	Glenda's Barber Shop	Jacquet River
Keith DeGrace	Atlantic Host Motel	Bathurst
Joe Pettigrew	SMI	Bathurst
Don Kay	MacDonald Pontiac-Buick	Moncton
Brian Murphy	Apprentice Adv. Board	Bathurst
Lloyd French	IBEW	Moncton
Bev Bawn	Ind. Training and Cert.	Chatham
John Boudreau	Ind. Training and Cert.	Campbellton
Ed Bennett	Community College	Moncton
Keith O'Shea	Community College	Moncton
Carmen Eldridge	Community College	St. Andrews
Madeleine Trenouth	Adv. Educ. and Training	Fredericton
Gary Gould	N.B. Assoc. of Metis and Non-Status Indians	Fredericton
Phil Fraser	N.B. Assoc. of Metis and Non-Status Indians	Fredericton
Andre Ferlatte	Adv. Education and Training	Fredericton
Claude Savoie	Adv. Education and Training	Fredericton

Ray Deveaux	Joint Apprentice Council	Fredericton
Nancy MacGarvie	C.E.I.C.	Fredericton
Barbara Kierstead-Shanks	C.E.I.C	Fredericton
Bertha MacKee	N.B. Hairdressers' Assoc.	Fredericton
Bev Hallem	C.E.I.C.	Fredericton
Denise Johnston	C.E.I.C.	Fredericton
Peter Waterhouse	R.P.C.	Fredericton

APPENDIX 2

APPENDIX 2

PARTIAL LISTING OF SOURCES USED

Apprenticeship Training in Canada: A theoretical and Empirical Analysis. Klaus Weiermair, Economic Council of Canada, 1984.

Ellis Chart: Apprentice Training Programs, 1983 Training Branch, C.E.I.C., Interprovincial Standards Program Co-ordinating Committee.

Forward Occupational Imbalance List. Employment and Immigration Canada, New Brunswick Region, 1986, 1987.

New Brunswick Job Futures: An Occupational Outlook to 1992. C.E.I.C. New Brunswick Region, 1986.

Annual Reports, Various Dates, Industrial Certification and Training Branch, Fredericton.

Industrial Training and Certification Act and Regulations, 1982. Queen's Printer for New Brunswick, Fredericton.

Building On Our Strengths. Royal Commission on Employment and Unemployment, St. John's, 1986.

Apprenticeship Training in Canada: An Overview of Its Administration and of Federal Intervention. H. John Meyer, C.E.I.C., 1986.

Canadian Jobs Strategy: Skill Shortages, Job Development, Job Entry, Skill Investment (Pamphlets). Canada Employment and Immigration Commission, Ottawa, July 1985.

APPENDIX 3

APPENDIX 3

INTERVIEW FORMAT: OFFICIALS

Explain purpose of study and interview.

Name: _____ Agency: _____

Position: _____ Telephone: _____

First, I would like to establish your familiarity with the Apprenticeship Training System. What has been your involvement with the Apprenticeship system?

Have you ever been consulted regarding industry's needs for apprenticeship training?

In your opinion, what is the main purpose of the apprenticeship training system?

Do you believe it does a good job in that respect?

What other benefits do you think resulted from that system? (Probe - who benefits)

Who do you think is the greatest beneficiary?

How are people selected for the apprentice training system?

Would you comment on the effectiveness of the selection process in getting good employees?

Would you comment on the fairness of the selection process as far as admitting the employment disadvantagd, women, natives, disabled, and other target groups?

In your opinion, does the apprenticeship system help ensure that training for apprenticeable trades is up-to-date technologically?

Does it help ensure that journeymen keep up-to-date technologically?

Do you believe it helps ensure the enforcement of nationwide standards, so that tradesmen can be mobile?

Do you think that imposing certain minimum time qualifications and examination requirements is a deterrent to people entering the apprenticeship system?

Are there other <u>deterrents</u> to entrance?

What type of entrance pre-requisites do you think are justified?

How well do you believe that apprenticeship has served to match up supply and demand for the skilled trades?

Do you think the apprenticeship system can or should be oriented to meet or reduce skill shortages in "emerging occupations".

Do you think the apprenticeship method can or should be oriented to helping workers whose jobs may be threatened by technology?

Do you think the apprenticeship method can or should be oriented to helping young people make the transition from school to work? (Probe role of instructor)

Do you think the the apprenticeship method can or should be oriented to assisting special needs groups in achieving their employment goals.

Could you compare the apprenticeship system and the Canadian Jobs Strategy as far as their goals and operations?

I wonder about your impression of the relative contribution of various participants to the costs of the apprenticeship system? That is what type of contribution should an apprentice make?

What should an employer contribute?

What activities should the government support?

What do you think is a proper sharing ratio?

How would you like to see the Apprenticeship System change in order to better serve your groups needs?

e.g Selection
Standards
Numbers
Trades

Young Peoples Needs?

e.g. Selection
Time
Standards
Trades

Industries Needs?

e.g. Number
Trades
Tech. Level
Cost
Wages

General Public Needs?

e.g. Selection
Standards
Costs (wages)
Numbers

Would you like to see greater consultation with industry about apprenticeship training? How?

APPENDIX 4

APPENDIX 4

INTERVIEW OF EMPLOYERS FOR STUDY OF
APPRENTICESHIP TRAINING SYSTEM

Hello, my name is _____ of Coles Associates Ltd.

We have been asked by the government to study aspects of the Apprenticeship Training System in New Brunswick.

We are interviewing 100 people as part of the study, and the provincial apprenticeship section gave us your name as a person (firm) to interview.

May I have 15-20 minutes of your time?

First, I would like to confirm your relationship to the apprenticeship system.

Firm Name: _____ Place: _____
Respondent Name: _____ Telephone: _____
Position: _____

A. In what trade do you hire the most apprentices? _____

B. About what number is the most you would employ at any one time?
_____

C. Are you a (1) union or (2) non union employer? _____
0) No response

D. As far as you are concerned, what is the purpose of the apprenticeship system?

1) To teach young adults a trade
2) To ensure a supply of qualified tradesmen for industry
3) To regulate the supply of tradesmen
4) To ensure that tradesmen have the most up-to-date skills
5) To uphold standards
6) Other: (specify) _____

_____

0) No response

E. Why does your firm hire apprentices?

1) Do our part to maintain the supply
2) Need to have the help
3) Union (or other agency) forces us to hire ratio
4) To keep the wages bill down
5) Other (explain): _____

_____

0) No response

F. What is the greatest benefit that your firm gets from apprenticeship?

1) Qualified personnel (certified, standard)
2) Meet <u>demand</u> for skilled labour
3) Help meet cost of training
4) Other (specify): _____
0) No response

G. Does the apprenticeship system help to train employees in high demand occupations where labor is in short supply?

1) Yes 2) No 0) No response

H. Has the apprenticeship system helped your firm to reduce layoffs due to technological change?

1) Yes 2) No 0) No response

I. Other than employers, who do you believe benefits most from the apprenticeship system?

1) The apprentice
2) The journeyman
3) The unions
4) The government
5) The public generally
6) Other (explain): _____

_____

0) No response

J. How does your firm select people to become apprentices?

1) Take general applications
2) Take referrals from friends/employees/family
3) Take referrals from unions
4) Take referrals from government system/schools/instructors
5) Other (explain): _____

_____

6) Don't know
0) No answer

K. Do you believe this method is effective for your firm to get the best employees?

1) Yes 2) No/Why? 0) No response

L. Do you believe this method is fair to everyone who wants to learn a trade?

1) Yes 2) No 0) No response

M. Have you hired apprentices or journeymen who received their training outside of New Brunswick?

1) Yes (go to Question N)
2) No (go to Question O)
0) No response

N. If yes, do you think their qualifications are: (read full question)
1) Better than
2) The same as
3) Not as good as
people trained in N.B.?
0) No response

O. Do you ask to examine an unfamiliar tradesman's:
1) Red Seal
2) Other certificate, or
3) Not
0) No response

P. Do you think the training of recent apprentices is: (read full question)
1) Better than
2) The same as
3) Not as good as
older journeyman?
0) No response

Q. In your opinion, how effective is the apprenticeship system in keeping apprentices up to date technologically? Is it (read choices)
1) Very good
2) Good
3) Not too good
4) Doesn't apply
0) No response

R. Do you think apprenticeship training provides a basis for a journeyman to keep up to date technologically?
1) Yes 2) No 3) Doesn't apply
0) No response

Read carefully or introduce.

S. Do you think recent apprentices learn (read full question)
1) more about
2) the same as
3) not as much about
modern technologies as journeymen know?
0) No response

T. To become a journeyman, do you believe it is more effective to spend a fixed amount of time as an apprentice, or should it be enough to demonstrate a person has mastered the skills of the trade?
1) Time
2) Mastery
3) Combination
4) Other (specify) _____
0) No response

U. For the principle trade you hire for, how many years do you think it usually needs for an apprentice to master the skills?
1) 1 2) 2 3) 3
4) 4 5) _____ 0) no response

V. Considering the block release training for that trade, do you think it would be a good thing to: (read all)
1) Reduce it
2) Increase it
3) Leave it the same
4) Other (explain): _____
0) No response

In addition to provincial administration, the Federal Government now pays about $2,400 annually for each apprentices block release training, including income support.

W. Do you think this effort spent on training apprentices is (read all)
1) too much
2) about right
3) too little
0) no response

X. What type of contribution do you make to the training of apprentices while on the job?
1) Wages
2) supervisor or trainer
3) Both 1 and 2
4) Other (name) _____
0) No response

Y. What type of contribution do you make to their training while they are in the classroom?
1) None
2) Top up wages
3) Hold job open (lost production)
4) Other (specify) _____
0) No response

Z. Do you think your contribution is (read all)
1) Too much 2) About right 3) Not enough
compared to the benefits you receive?
0) No response

AA. Would you be willing to make a greater contribution?
1) Yes 2) No 0) No response

BB. Do you think the contribution apprentices make is

1) Too much 2) About right 3) Not enough

0) No response

CC. If the government were to reduce its contribution to apprenticeship training, where do you think they could cut back?

1) Classroom training (pre apprentice and block release)
2) Training allowances
3) Supervision of on-the-job training
4) Administration of exams and time documentation
5) Both 1 and 2
6) Both 3 and 4
7) Across the board
8) Other (specify): _____
0) No response

DD. In the principle trade you hire for, do you think the supply of qualified tradesmen is: (read all)

1) Too many 2) Enough 3) Too few

0) No response

EE. In that same trade, is the number of apprentices being trained (read all)

1) Too many 2) Enough 3) Too few

0) No response

FF. Do you hire apprentices and tradesmen from such special target groups, as women, natives, visible minorities or disabled people?

1) Yes (go to Question HH)
2) No (see next question)
0) No response (go to Question HH)

GG. Why not?

1) List first answer

_____

_____

9) Does not apply

0) No response

HH. Do you think the apprenticeship system should try to help those groups gain access to employment?

1) Yes 2) No 0) No response

II. Do you think an effort to serve such special needs groups would affect the quality of tradesmen in your industry?

1) Yes (See next question)

2) No (Skip next question)

3) Other (specify): _____

0) No response.

JJ. If yes, In what way

1) List first one

_____

_____

9) Does not apply

0) No response

KK. Could you suggest ways that access by minorities and special groups could be increased.

1) List first one

_____

_____

0) No response

LL. Do you think it would be useful to extend the apprenticeship system to include more trades than now?

1) Yes (See next question)
2) No (Skip next question)
0) No response

MM. If yes

1) Name an occupation _____
9) Does not apply
0) No response

NN. Record any general comments.

1) Comment:

_____

_____

0) No response

OO. Record interview number __ __ __ __

Thank you.

APPENDIX 5

APPENDIX 5

INTERVIEW OF APPRENTICES AND JOURNEYMAN

Hello, my name is _____ of Coles Associates Ltd.

We have been asked by the governments to study the apprenticeship system in New Brunswick.

We are interviewing 120 apprentices and journeyman as part of the study. The Apprenticeship Section gave us your name as a person to interview.

May I have 10-15 minutes of your time?

First, I'd like to confirm information about your participation in the trade.

Interviewer verify:

Name: _____ A. Trade _____

Place: _____ B. Status (1) Apprentice

Telephone: _____ (2) Journeyman

C. How many years have you been (apprenticed) (a journeyman)? ___ ___

D. Do you belong to a union (1) or (2) not?

E. When did you most recently work at the trade?

1) Currently working
2) 1-3 months ago
3) 4-6 months ago
4) 7-12 months ago
5) More than one year ago
6) Other (specify) _____
0) No response

F. When were you last employed in any occupation?

1) Currently working
2) 1-3 months ago
3) 4-6 months ago
4) 7-12 months ago
5) More than one year ago
6) Other (specify) _____
0) No response

G. Why did you go into apprenticeship training?

1) Wanted to learn this trade, to get my license
2) Wanted to learn any trade
3) Liked the method of learning while earning
4) Peer or parental pressure
5) Counselled/received advice
6) Other: explain _____
0) No response

H. What contact did you have with the trade before being apprenticed?

1) Pre-apprentice program
2) Vocational high school
3) Was employed in the trade
4) Family members worked at trade
5) None
6) Both 1 and 2
7) Other (specify): _____
0) No response

I. How did you get your job as an apprentice? (read probes if needed)
For example, were you

1) Referred by pre-apprentice instructor
2) Referred by family or friend
3) Referred by union
4) Applied for and got job on own
5) Other (specify): _____
0) No response

J. What do you think is the purpose of the apprenticeship system?

1) The way (best way) to learn a trade
2) To ensure a supply of qualified tradesmen for industry
3) Allows a person to work anywhere (mobility) (always have a job)
4) To uphold standards/structured method
5) Way to regulate supply of tradesmen
6) To ensure tradesmen have the most up-to-date skills
7) Other (specify): _____
0) No response

K. What is the greatest benefit that you personally got from apprenticeship?

1) Got a job (stable job)
2) Learned the trade
3) Earned while learned
4) Other (specify): _____
0) No response

L. Other than apprentices, who do you believe benefits most from the apprenticeship system?

1) Employers
2) Government
3) Public
4) Other (specify): _____
0) No response

M. What benefit do they get? (no probe)

1) List first one:

_____

_____

0) No response

A lot of work is done across the country to make sure that apprenticeship training is kept up to date and is the same in all provinces.

N. Did your on-the-job apprentice training include the most modern techniques in the trade?

1) Yes 2) No 0) No response

O. Did your block release training include the most modern techniques in the trade?

1) Yes 2) No 0) No response

If NO to both N and O go to Question R.
If YES to either above answer Question P and Q.

P. Did this help you to get a job in the trade?

1) Yes 2) No 9) Not apply
0) No response

Q. Did it help you to hold a job in the trade?

1) Yes 2) No 9) Not apply
0) No response

Go to Question T.

If NO to both N and O, answer R and S

R. Did this hurt you in getting a job in the trade?

1) Yes 2) No 9) Not apply
0) No response

S. Did this hurt you in holding a job in the trade?

1) Yes 2) No 9) Not apply
0) No response

T. Have you ever worked with tradesmen or apprentices trained outside of New Brunswick?

1) Yes 2) No 3) No response

If no or no response go to Question V.

U. If yes, do you think their qualifications are (read all parts)

1) better than
2) the same as
3) not as good as

people trained in New Brunswick?

0) no response

V. As far as tradesmen trained in New Brunswick, do you think the training of recent apprentices is (read all parts)

1) better than
2) the same as
3) not as good as

journeyman?

0) No response

Read carefully or introduce

W. Do you think recent apprentices learn (read all parts)

1) more about
2) the same as
3) not as much about

modern technologies as journeymen know?

0) No response

Journeymen only - next three questions

X. Do you think your apprenticeship training provided a basis for keeping your skills up-to-date?

1) Yes 2) No/Why 3) Part (explain)
0) No response 9) Not asked

Y. Have you worked at your trade outside New Brunswick?

1) Yes 2) No 0) No response
9) Not asked

Z. Did the employers there ask for your Red Seal (1), or other certification (2), or not (3)? or (0) No response or (9) Not asked

AA. All respondents. In order to become a journeyman, do you believe it is more effective to spend a fixed amount of time as an apprentice, or should it be enough to demonstrate you have mastered the skills of the trade?

1) Time
2) Mastery
3) Combination
4) Other (explain): _____
0) No response

BB. For yourself, how many years apprenticeship do you think (are) (were) necessary before you could be certified?

1) 1
2) 2
3) 3
4) 4
5) Other (specify): _____
0) No response

CC. Do you think the Block Release part of training should be reduced?

1) Yes 2) No 0) No response

In addition to the provincial administrative costs, the Federal Government now calculates that it costs $2,400 each year for each apprentice's block release training.

DD. Do you consider that you have also contributed to your training?
1) Yes 2) No 0) No response

EE. If yes, do you think your contribution was (read all parts).
1) too much
2) about right
3) not enough
compared to the benefits you got?
0) No response

FF. Would you be willing to make a greater contribution?
1) Yes 2) No 0) No response

GG. Do you consider that your employer also contributed to your training?
1) Yes
2) No (go to Question II)
0) No response

HH. If yes, do you think the employers contribution was (read all parts):
1) too much
2) about right
3) not enough
compared to the benefits he/she gets?
0) No response

II. If the government reduces its contribution to apprenticeship, where do you think they should cut back?

1) Classroom training (Pre-apprentice and block release)
2) Training allowances
3) Supervision of on-the-job training
4) Administration of exams and time recording
5) Both 1 and 2
6) Both 3 and 4
7) Across the board (1 and 2 and 3 and 4)
8) Other (specify): _____
0) No response

Another interest of the government is in being sure that minorities and special groups have fair access to training and good jobs.

JJ. As far as you know, do these groups have fair access to your trade?

1) Yes 2) No 0) No response

KK. Could you suggest ways that such access could be increased?

1) List first one mentioned.

_____

_____

0) No response

LL. Do you think it would be useful to extend the apprenticeship system to include more trades than now?

1) Yes 2) No 0) No response

MM. If yes,

1) name an occupation (no probe)

_____

0) No response

NN. Record any general comments.

1) List comment

_____

_____

_____

0) No response

OO. Record Interview Number _ _ _ _

Thank you.

APPENDIX 6

APPENDIX 6

CANADIAN JOBS STRATEGY PROGRAMS

Skill Shortages

Objectives: 1) To provide support for incremental training in areas of nationally and regionally designated, existing and potential, occupational skill shortages in order to provide the economy with the skills necessary to remain competitive.

2) In respect of this objective, incremental training is designed to identify those training situations which would not have otherwise occurred without program assistance. The training itself may represent increases in either the quantity or the quality of training.

Job Entry

Entry/Re-Entry

Objective: To assist persons havving difficulty in making the transition from school or home to the labour market.

Sub-Objectives: 1) To provide participants with an integrated combination of on and off-site training and experience, particularly in small and medium sized businesses.

2) To provide participants with a skills base in preparation for employment, increased earning capacity and more specialized training.

3) To support the implementation of "employment equity" principles through the program.

4) To increase employer commitment, particularly in the private sector, to human resource planning and the provision of structured, quality training.

5) To encourage the participation and collaboration of business, labour, governments and community groups in meeting local training needs.

Cooperative Education

Objective: To stimulate the provision of developmental work-study experience for secondary and post-secondary students whose transition from student to full-time worker and integration into the labour market may be facilitated or enhanced by this measure.

.../2

Job Entry

Cooperative Education

Sub-Objectives: 1) To provide opportunities to Canada's on-coming labour force to overcome the barrier to employment of not havinfg related work experience.

2) To encourage innovative approaches to work-study and to enrich current knowledge on the benefits of experimental learning.

Skill Investment

Objective: To assist employed workers to obtain new skills in response to changing technology and markets.

Extended Training Leave

Sub-Objectives: 1) To encourage the initiative of employers and workers in upgrading their skills.

2) To assist persons whose employment is subject to change or elimination due to technology and market changes.

3) To assist employers whose activities are affected by technological or market changes by subsidizing the necessary training and re-training of their employees.

Small Business Training

Sub-Objective: To support the program's objective of assisting employed workers to obtain new skills in response to changing technology and markets and to provide for retraining prior to or as an alternative to layoff in a variety of adjustment situations.

Training Trust Fund

Sub-Objective: To assist workers to adjust to labour market changes by contributing to Training Trust Funds established by employee associations independently or jointly with employers for the purpose of assisting workers to obtain new skills in response to changing technology and markets.

.../3

Skill Investment

Direct Purchase

Sub-Objectives: 1) To encourage the initiative of workers in upgrading their skills or learning new skills, in order to maintain their labour force attachment.

2) To assist persons whose employment is subject to change or elimination due to technology and market changes.

Job Development

Objective: To assist long-term unemployed individuals to participate effectively in the labour market, including the provision of special assistance to those individuals among this group who are employment-disadvantaged or severely employment-disadvantaged.

Innovations

Objective: To stimulate and support innovative labour market initiatives through pilot programs and projects, demonstration projects and development activities which will lead to the improved functioning of the labour market.

Sub-Objectives: 1) To foster innovative initiatives by the private sector and other economic partners related to their responsibilities for the improvement of training and labour market activities.

2) To support innovations in established labour market priority areas identified as requiring new, flexible and innovative approaches.

3) To test proposals for alternative approaches to the implementation of existing labour market policies that might lead to increased effectiveness and/or efficiency.

4) To support innovative initiatives that would assist in the identification and development of new or changed labour market policy goals.

Community Futures

Objective: To provide a means for cooperative participation of local groups, including municipal authorities, in the assessment of communities' economic problems and the development of employment opportunities and worker-based adjustment measures.

APPENDIX 7

APPENDIX 7

TERMS OF REFERENCE

PROJECT TITLE

Joint Federal-Provincial Study of Apprenticeship in New Brunswick

PROJECT SPONSORS

Canada Employment and Immigration Commission
New Brunswick Department of Advanced Education and Training

BACKGROUND

The New Brunswick Industrial Training and Certification Act provides for the training, examination and certification of apprentices in a variety of trades. The apprenticeship training system has been a major source of qualified workers for the New Brunswick labour force since its introduction in 1944. The Federal Government has provided funding for the classroom portion of most apprenticeship training as well as financial assistance in the form of unemployment insurance or training allowances for many apprentices undertaking classroom training.

This study is one of several joint federal provincial studies being undertaken across Canada, the results of which will identify possible improvements and changes needed and will form part of the information base to be considered in arriving at a decision on the future roles of support for apprenticeship training.

PURPOSE

The purpose of this study is to determine the effectiveness of apprenticeship training in meeting federal & provincial labour market objectives and to identify where improvements or changes to the existing system are required. Specific objectives are:

A. Provide a history of apprenticeship training in New Brunswick and a description of the present system.

B. Assess the effectiveness of the apprenticeship training system in regard to:

   a) Benefits to apprentices, employers, the Province of New Brunswick and Canada.

   b) Effectiveness of the apprenticeship training system to satisfy the needs of the labour market both in numbers of apprentices and the range of trades covered under the Apprenticeship Program.

B. c) Contribution in alleviating skill shortages in New Brunswick and Canada.

d) Success in keeping pace with emerging occupations and new areas of apprenticeship training.

e) Providing opportunities for target groups.

C. Assess the delivery mechanism with regard to:

a) Employer selection of apprentices as an indicator of labour requirements in the private sector.

b) Adequacy of the present selection process in dealing with employment equity issues and target group participation. Suggest ways to increase the participation of women, natives, persons with disabilities and visible minorities in apprenticeship training.

c) Advantages and disadvantages of the Block Release course format. Assess alternative cost-effective and appropriate methods of training.

d) Benefits of competency-based training versus time-based training.

e) Quality of apprenticeship training. Assess present competence control procedures.

f) Adequacy of existing methods of consultation with industry to keep abreast of technological change.

D. Analyse the funding of apprenticeship training in New Brunswick:

a) Determination of the cost-sharing of the Federal Government, the government of New Brunswick, the employer and the apprentices.

b) Analysis of the present costing approaches.

c) Assessment of the allowance structure for apprentices.

d) Assessment of the consequences to apprenticeship training of altering current public contributions to New Brunswick's apprenticeship program and identifying possible alternative arrangements for funding. What might be an appropriate distribution of costs between various participants relative to the benefits derived.

E. Study interprovincial and national issues regarding standards and mobility:

a) Determine to what extent present New Brunswick programs and the interprovincial Red Seal Program facilitate the inter/intra-provincial mobility of apprentices and certified employees.

b) Assess the barriers to the mobility of apprentices, both geographically and occupationally, and study how mobility can be enhanced.

STUDY PROCESS

A consultant will be hired to undertake the study. A Steering Committee composed of officials of the C.E.I.C. and the Department of Advanced Education and Training will direct and monitor the work of the consultant. The Committee will be co-chaired.

As Director of Apprenticeship and Occupational Certification, J. Sidney Harris of D.A.E.T. will be the chief resource person for facilitating contacts with appropriate apprenticeship interests.

SCOPE

A variety of associations, organizations and individuals will be consulted for documented input regarding the issues identified in the Terms of Reference:

- Employers and employer organizations - the study should involve input from employers of non-apprentices as well as those participating in the apprenticeship system
- Industrial Training and Certification Board
- Labour organizations
- Apprentices and former apprentices
- Federal and Provincial officials
- Representatives of training institutions
- Special interest groups
- Other sources of information

The cost of the study is anticipated to be within $15,000 and $25,000.

The duration of the study including final reporting will not exceed 4 months.

All work undertaken must recognize the existence and requirements of the two official languages.

STUDY METHODOLOGY AND SCHEDULE

Information will be collected from a number of sources:

(1) surveys of key persons/interest groups

(2) gathering of historical data/information

(3) personal interviews

(4) analysis of previous survey data

(5) literature review

(6) contacts with other jurisdictions

The consultant will be expected to indicate to the Steering Committee the particular methodology planned to address the issues identified.

A timetable for completion of the study by week and an estimate of costs should be provided.

STUDY DEADLINE - JUNE 15, 1987.
PROPOSAL DEADLINE - FEBRUARY 19, 1987

CONTACT

Yvette McLaughlin
Dept. of Advanced Education & Training
P.O. Box 6000
Fredericton, New Brunswick E3B 5H1
506-453-2889

Nancy MacGarvie
Canada Employment and Immigration Commission
P.O. Box 2600
Fredericton, New Brunswick E3B 5V6
506-452-3734